Selected Acquisition Report (SAR)

RCS: DD-A&T(Q&A)823-199

Family of Advanced Beyond Line-of-Sight Terminals (FAB-T)

As of FY 2017 President's Budget

Defense Acquisition Management
Information Retrieval
(DAMIR)

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Common Acronyms and Abbreviations for MDAP Programs

Acq O&M - Acquisition-Related Operations and Maintenance
ACAT - Acquisition Category
ADM - Acquisition Decision Memorandum
APB - Acquisition Program Baseline
APPN - Appropriation
APUC - Average Procurement Unit Cost
$B - Billions of Dollars
BA - Budget Authority/Budget Activity
Blk - Block
BY - Base Year
CAPE - Cost Assessment and Program Evaluation
CARD - Cost Analysis Requirements Description
CDD - Capability Development Document
CLIN - Contract Line Item Number
CPD - Capability Production Document
CY - Calendar Year
DAB - Defense Acquisition Board
DAE - Defense Acquisition Executive
DAMIR - Defense Acquisition Management Information Retrieval
DoD - Department of Defense
DSN - Defense Switched Network
EMD - Engineering and Manufacturing Development
EVM - Earned Value Management
FOC - Full Operational Capability
FMS - Foreign Military Sales
FRP - Full Rate Production
FY - Fiscal Year
FYDP - Future Years Defense Program
ICE - Independent Cost Estimate
IOC - Initial Operational Capability
Inc - Increment
JROC - Joint Requirements Oversight Council
$K - Thousands of Dollars
KPP - Key Performance Parameter
LRIP - Low Rate Initial Production
$M - Millions of Dollars
MDA - Milestone Decision Authority
MDAP - Major Defense Acquisition Program
MILCON - Military Construction
N/A - Not Applicable
O&M - Operations and Maintenance
ORD - Operational Requirements Document
OSD - Office of the Secretary of Defense
O&S - Operating and Support
PAUC - Program Acquisition Unit Cost

PB - President’s Budget
PE - Program Element
PEO - Program Executive Officer
PM - Program Manager
POE - Program Office Estimate
RDT&E - Research, Development, Test, and Evaluation
SAR - Selected Acquisition Report
SCP - Service Cost Position
TBD - To Be Determined
TY - Then Year
UCR - Unit Cost Reporting
U.S. - United States
USD(AT&L) - Under Secretary of Defense (Acquisition, Technology and Logistics)

Program Information

Program Name

Family of Beyond Line-of-Sight - Terminals (FAB-T)

DoD Component

Air Force

Joint Participants

US Navy (E-6 TACAMO aircraft); US Navy (Ground Terminals); US Army (Ground Terminals)

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Date Assigned: February 10, 2014

References

CPT

SAR Baseline (Development Estimate)

Defense Acquisition Executive (DAE) Approved Acquisition Program Baseline (APB) dated December 23, 2007

Approved APB

Under Secretary of Defense (Acquisition, Technology & Logistics) Approved Acquisition Program Baseline (APB) dated March 3, 2016

FET

SAR Baseline (Development Estimate)

Defense Acquisition Executive (DAE) Approved Acquisition Program Baseline (APB) dated December 23, 2007

Approved APB

Defense Acquisition Executive (DAE) Approved Acquisition Program Baseline (APB) dated March 3, 2016

Mission and Description

The Family of Advanced Beyond Line-of-Sight Terminals (FAB-T) program will develop nuclear event-survivable terminals capable of communicating with the Milstar and Advanced Extremely High Frequency (AEHF) satellite constellations using both the Extremely High Frequency and AEHF jam-resistant, low probability of intercept and low probability of detection waveforms. These terminals will be an essential component of the strategic nuclear execution system.

The CPT subprogram provides a nuclear survivable terminal capable of communicating with the Milstar and AEHF satellites from airborne and ground fixed and mobile locations, provides an interface for the Presidential and National Voice Conferencing (PNVC) function; the Telemetry, Tracking & Control for the Milstar and AEHF constellations, for Nuclear Command, Control, & Communications (NC3) data transport services [Emergency Action Message (EAM) injection, dissemination and reportback], and for Integrated Tactical Warning and Attack Assessment survivable data relay. The CPT will replace existing Milstar-only terminals for ground fixed and mobile command locations, as well as in the airborne E-4B and E-6 aircraft.

The FET subprogram provides a nuclear survivable terminal capable of communicating with the Milstar and AEHF satellites, and provides for survivable NC3 data transport services (EAM dissemination and force reportback) for airborne platforms. The FET is for the B-2, B-52, and select RC-135 aircraft and will not provide satellite control or PNVC functionality. The initial installation and integration is a significant effort with antenna configurations which will differ from one aircraft type to another.

Executive Summary

In 2015, the FAB-T program experienced programmatic successes in three areas: creation of the CPT and FET subprograms, Milestone C achievement for the CPT subprogram, and development of a new APB incorporating both subprograms.

In preparation for the Milestone C decision, the contractor successfully accomplished all ground and airborne system-level qualification testing for the terminal and the ground and airborne antennas with modification kits. The contractor also conducted factory payload (Milstar and AEHF) satellite control risk reduction testing. The government Lead Developmental Test & Evaluation Organization (46th Test Squadron) performed successful flight testing and the first phase of Interoperability testing for Joint Interoperability Test Command certification of the FAB-T that included 15 Nuclear Command, Control, and Communications (NC3) terminals, operational baseband crypto and messaging devices, and 13 distinct communications networks emulating multiple operational configurations.

On July 30, 2015, USD(AT&L) notified Congress that the FAB-T program is being restructured into the CPT and FET subprograms. This FAB-T SAR has been structured to comply with this new direction. While the FET remains a valid requirement for the FAB-T program, it is currently unfunded and the Air Force has not yet finalized its strategy for FET development. The subprogram cost estimates were revised and based on the SCP signed on July 7, 2015. Allocations of sunk costs between the CPT and FET subprograms are based on the OSD CAPE assessment in preparation for the Milestone C DAB.

FAB-T conducted a CPT-only Milestone C DAB, resulting in the October 26, 2015 ADM authorizing a total LRIP quantity of 53 FAB-T CPT terminals. The first LRIP terminal delivery is projected for the end of the 4th Quarter CY 2016. SAF/AQ and SAF/FM signed a Full Funding Memo on September 15, 2015, fully endorsing the July 7, 2015 CPT SCP. An APB reflecting the restructure of the FAB-T program was approved on March 3, 2016 and includes updated cost, performance, schedule, and quantity distributions to support re-baselining the program.

The CPT schedule is holding with no changes to IOC or FOC. However, there was a minor schedule adjustment to the Initial Operational Test & Evaluation (IOT&E) event due to delays resulting from concurrent development and testing of three antenna configurations and availability of Engineering Development Models (EDMs). In addition, the increased LRIP quantity of 53 terminals is now sufficient to satisfy IOC requirements and affords schedule flexibility to accommodate a shift of FRP to the right without impacting the IOC date.

There are no significant software-related issues with this program at this time.

Threshold Breaches

CPT

APB Breaches		
Schedule		☐
Performance		☐
Cost	RDT&E	☐
	Procurement	☐
	MILCON	☐
	Acq O&M	☐
O&S Cost		☐
Unit Cost	PAUC	☐
	APUC	☐

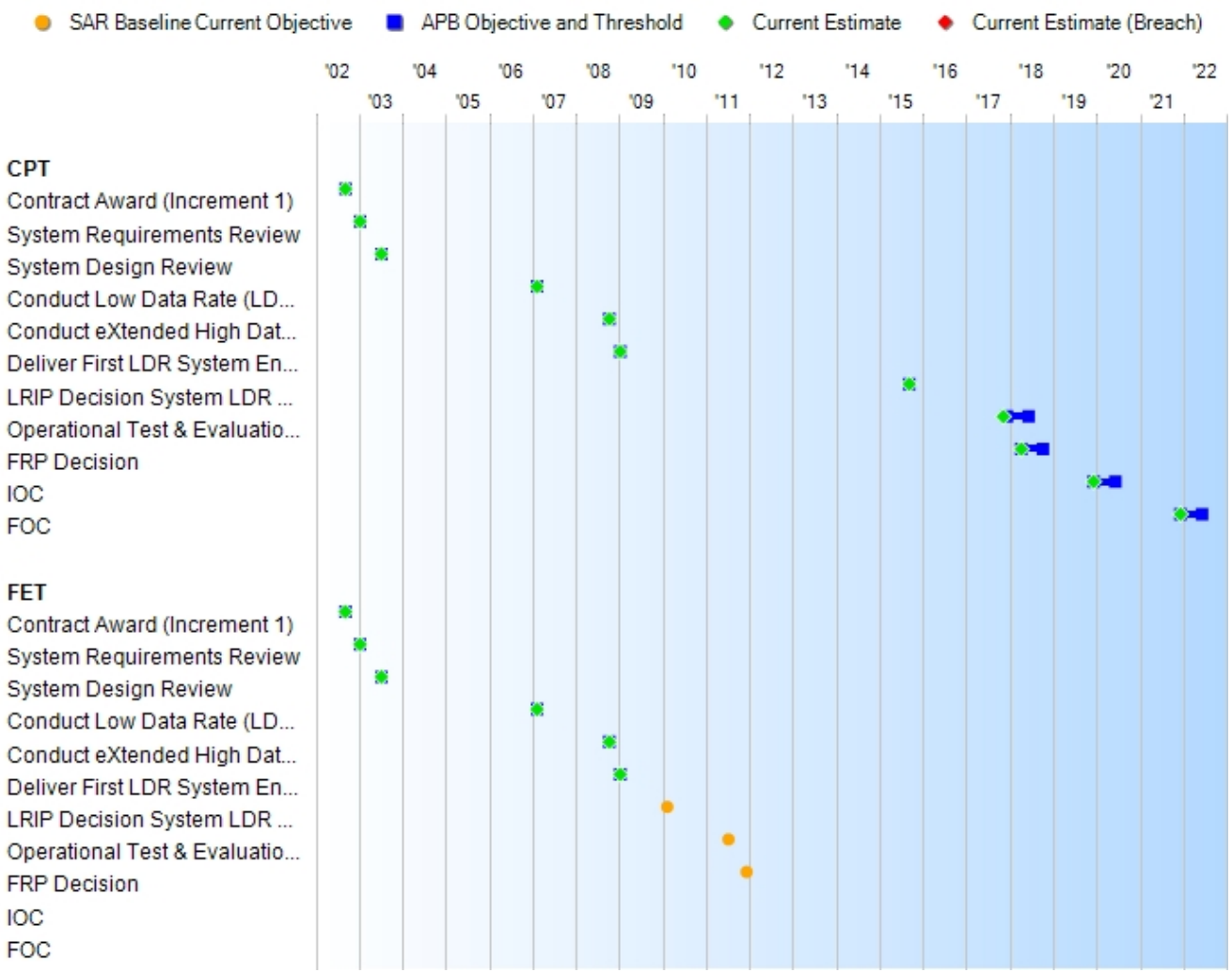
Nunn-McCurdy Breaches		
Current UCR Baseline		
	PAUC	None
	APUC	None
Original UCR Baseline		
	PAUC	None
	APUC	None

FET

APB Breaches		
Schedule		☐
Performance		☐
Cost	RDT&E	☐
	Procurement	☐
	MILCON	☐
	Acq O&M	☐
O&S Cost		☐
Unit Cost	PAUC	☐
	APUC	☐

Nunn-McCurdy Breaches		
Current UCR Baseline		
	PAUC	None
	APUC	None
Original UCR Baseline		
	PAUC	None
	APUC	None

Schedule


SAR Baseline Current Objective
APB Objective and Threshold
Current Estimate
Current Estimate (Breach)
'02
'03
'04
'05
'06
'07
'08
'09
'10
'11
'12
'13
'14
'15
'16
'17
'18
'19
'20
'21
'22
CPT
Contract Award (Increment 1)
System Requirements Review
System Design Review
Conduct Low Data Rate (LD...
Conduct eXtended High Dat...
Deliver First LDR System En...
LRIP Decision System LDR ...
Operational Test & Evaluatio...
FRP Decision
IOC
FOC
FET
Contract Award (Increment 1)
System Requirements Review
System Design Review
Conduct Low Data Rate (LD...
Conduct eXtended High Dat...
Deliver First LDR System En...
LRIP Decision System LDR ...
Operational Test & Evaluatio...
FRP Decision
IOC
FOC

CPT

Schedule Events					
Events	**SAR Baseline Development Estimate**	**Current APB Production Objective/Threshold**		**Current Estimate**	
Contract Award (Increment 1)	Sep 2002	Sep 2002	Sep 2002	Sep 2002	
System Requirements Review	Jan 2003	Jan 2003	Jan 2003	Jan 2003	
System Design Review	Jul 2003	Jul 2003	Jul 2003	Jul 2003	
Conduct Low Data Rate (LDR) System Critical Design Review (CDR)	Feb 2007	Feb 2007	Feb 2007	Feb 2007	
Conduct eXtended High Data Rate (XDR) System CDR	Oct 2008	Oct 2008	Oct 2008	Oct 2008	
Deliver First LDR System Engineering Development Model (EDM)	Dec 2008	Jan 2009	Jan 2009	Jan 2009	
LRIP Decision System LDR and XDR	Feb 2010	Sep 2015	Sep 2015	Sep 2015	(Ch-1)
Operational Test & Evaluation (OT&E) Complete	Jul 2011	Dec 2017	Jun 2018	Nov 2017	(Ch-2)
FRP Decision	Dec 2011	Apr 2018	Oct 2018	Apr 2018	(Ch-2)
IOC	Jun 2013	Dec 2019	Jun 2020	Dec 2019	
FOC	Sep 2016	Dec 2021	Jun 2022	Dec 2021	

Change Explanations

(Ch-1) LRIP Decision System LDR Current Estimate changed from August 2015 to September 2015 to reflect actual date of occurrence.
(Ch-2) OT&E Complete and FRP Decision Current Estimates changed from July 2017 to November 2017 and November 2017 to April 2018, respectively.

Acronyms and Abbreviations

CDR - Critical Design Review
EDM - Engineering Development Model
IOT&E - Initial Operational Test & Evaluation
LDR - Low Data Rate
NLT - No Later Than
OT&E - Operational Test & Evaluation
XDR - eXtended Data Rate

FET

Schedule Events					
Events	**SAR Baseline Development Estimate**	**Current APB Production Objective/Threshold**		**Current Estimate**	
Contract Award (Increment 1)	Sep 2002	Sep 2002	Sep 2002	Sep 2002	
System Requirements Review	Jan 2003	Jan 2003	Jan 2003	Jan 2003	
System Design Review	Jul 2003	Jul 2003	Jul 2003	Jul 2003	
Conduct Low Data Rate (LDR) System Critical Design Review (CDR)	Feb 2007	Feb 2007	Feb 2007	Feb 2007	
Conduct eXtended High Data Rate (XDR) System CDR	Oct 2008	Oct 2008	Oct 2008	Oct 2008	
Deliver First LDR System Engineering Development Model (EDM)	Dec 2008	Jan 2009	Jan 2009	Jan 2009	
LRIP Decision System LDR and XDR	Feb 2010	TBD	TBD	TBD	
Operational Test & Evaluation (OT&E) Complete	Jul 2011	TBD	TBD	TBD	
FRP Decision	Dec 2011	TBD	TBD	TBD	
IOC	N/A	N/A	N/A	N/A	(Ch-1)
FOC	N/A	N/A	N/A	N/A	(Ch-1)

Change Explanations

(Ch-1) IOC and FOC schedule events will remain "N/A" pending AF decision on how and when to include FETs in the AF budget, as well as development of an acquisition strategy to support that plan.

Notes

The FET subprogram schedule for LRIP, IOT&E, and FRP are TBD at this time. While the FET remains a valid requirement for the FAB-T program, it is currently unfunded and the Air Force has not yet finalized its strategy for FET development.

Acronyms and Abbreviations

IOT&E - Initial Operational Test & Evaluation
LDR - Low Data Rate
XDR - eXtended Data Rate

Performance

CPT

Performance Characteristics				
SAR Baseline Development Estimate	**Current APB Production Objective/Threshold**		**Demonstrated Performance**	**Current Estimate**
Interoperability				
Enable all top-level IERs, as depicted by mission area and designated critical between sending and receiving nodes	N/A	N/A	All top-level information exchange requirements (IERs) have been incorporated into the CPT design and were demonstrated in qualification testing. The 46th Test Squadron has performed flight testing and ground interoperability testing in coordination with JITC and the JTEO to independently evaluate the CPT's IER performance across multiple mission areas. Additional NC3 and satellite C2 test events are scheduled in 2016.	Enable all top-level IERs, as depicted by mission area and designated critical between sending and receiving nodes
Information Assurance				
Meet DoD IA criteria and be certified/ accredited IAW DoD 8510.1-M, DoD 8500.1, and DoDI 8500.2, or DoD certification	N/A	N/A	System is being built to DIACAP controls and Security Technical Implementation Guides (STIGs). STIG testing against Operator Processing Unit	Meet DoD IA criteria and be certified/ accredited IAW DoD 8510.1-M, DoD 8500.1, and DoDI 8500.2, or DoD certification and accreditation process at time of contract award

and accreditation process at time of contract award			(OPU) performed in April 2014, November 2014, and October 2015. Initial DIACAP demonstration testing completed in January 2015. DIACAP control inspection completed in June 2015. Program has developed mitigations to non-compliant controls/STIG rules and reviewed with Space Authorizing Official in October 2015.	
Survivability				
FMC w/o damage/ degradation, throughout the nuclear environment that the aircraft is expected to survive, while meeting PCMR requirements	N/A	N/A	Tested parts for radiation hardness, analysis validated terminal level probability of survival; NSV testing for Block 1 completed in June 2015. Dose rate testing for the new airborne antenna is planned to complete in 1st Quarter FY 2016.	FMC w/o damage/ degradation, throughout the nuclear environment that the aircraft is expected to survive, while meeting PCMR requirements
CPT Control Interface				
Support use of ASMCS and MPSS satellite/ network/ terminal control equipment	N/A	N/A	Raytheon testing demonstrated FAB-T supports ASMCS and MPSS interfaces and communications during Satellite Command and Control test events on the AEHF and Milstar factory payloads at the NAST-T and CMS facilities as well as during system-	Support use of ASMCS and MPSS satellite/ network/ terminal control equipment.

			level Prime Item Block 2 testing. The 46th Test Squadron will further demonstrate satellite control via an operational ASMCS during TT&C testing.	
CPT Backwards Compatability				
Compatibility with legacy EHF baseband functions associated with individual AEHF service/ networks, SCIS, NPES, IEMATS, DIRECT and the Red Switch	N/A	N/A	Demonstrated all serial interfaces with FAB-T communicating over Milstar and AEHF satellites in May 2015. Compatibility with the Milstar Messaging Application (MMA) and DIRECT systems was demonstrated in 4th Quarter FY 2015.	Compatibility with legacy EHF baseband functions associated with individual AEHF service/ networks, SCIS, NPES, IEMATS, DIRECT and the Red Switch.
CPT Existing Terminal Coexistence				
Inter-operable with existing EHF terminals	N/A	N/A	Interoperability with legacy AFCPT, NMT, SMART-T, MMPU, FOT, DMU, and SCAMP terminals was demonstrated in FY15 using Milstar and AEHF satellites. Link quality testing as well as simulated EAMs, FDMs, and Reportbacks have been exchanged.	Interoperable with existing EHF terminals
CPT Satellite Constellation Coexistences				
Inter-operable with the AEHF, APS, Milstar, and UFO-E/EE	N/A	N/A	Simultaneous use of the legacy AFCPT with the FAB-T CPT in Milstar and AEHF networks was successfully conducted	Interoperable with the AEHF, APS, Milstar, and UFO-E/EE

			November 2014 and June 2015. Satellite control coexistence with ACF-IC2 on Milstar and AEHF was demonstrated in FY 2015 and will be repeated during TT&C testing.	
Network Ready: The system must support Net-Centric military operations. The system must be able to enter and be managed in the network, and exchange data in a secure manner to enhance mission effectiveness. The system must continuously provide survivable, interoperable, secure, and operationally effective information exchanges to enable a Net-Centric military capability.				
N/A	The FAB-T system must support net-centric military operations, enter and be managed in the network, and exchange information as described in Table 6 of the CPD. FAB-T is a BLOS Transport Layer element of communication infrastructures and as such several NR-KPP attributes and measures are described in other KPPs. FAB-T architecture products are compliant with CJCSI 6212.01F dated 21 Mar 12.	(T=O) The FAB-T system must support net -centric military operations, enter and be managed in the network, and exchange information as described in Table 6 of the CPD. FAB-T is a BLOS Transport Layer element of communication infrastructures and as such several NR-KPP attributes and measures are described in other KPPs. FAB-T architecture products are compliant with CJCSI 6212.01F dated 21 Mar 12.	TBD	The FAB-T system must support net-centric military operations, enter and be managed in the network, and exchange information as described in Table 6 of the CPD. FAB-T is a BLOS Transport Layer element of communication infrastructures and as such several NR-KPP attributes and measures are described in other KPPs. FAB-T architecture products are compliant with CJCSI 6212.01F dated 21 Mar 12.
Strategic Services: FAB-T provides positive control of strategic information exchange.				
N/A	Terminals supporting nuclear/strategic operations will enable Emergency Action Message dissemination while meeting the Probability of Correct Message Receipt requirements stated in Appendix F to Enclosure A of CJCSI 6811.01. Terminals will be capable of supporting improved Senior Leadership conferencing. Terminals used for POTUS and SECDEF voice	(T=O) Terminals supporting nuclear/strategic operations will enable Emergency Action Message dissemination while meeting the Probability of Correct Message Receipt requirements stated in Appendix F to Enclosure A of CJCSI 6811.01. Terminals will be capable of supporting improved Senior Leadership conferencing. Terminals used for POTUS and	TBD	Terminals supporting nuclear/strategic operations will enable Emergency Action Message dissemination while meeting the Probability of Correct Message Receipt requirements stated in Appendix F to Enclosure A of CJCSI 6811.01. Terminals will be capable of supporting improved Senior Leadership conferencing. Terminals used for POTUS and SECDEF voice

	conferencing will support the Milstar and AEHF CONOPS using up to twelve simultaneous voice networks. FAB-T will provide interfaces to support PNVC and Survivable Emergency Conferencing Network equipment. PNVC and SECN equipment are external to the FAB-T. Each nuclear Command Center node must be able to simultaneously support all services assigned to that node/platform as mandated in the Emergency Action Procedures of the Joint Staff Volume VII for Joint Staff directed networks and the USSTRATCOM Network Operating Instruction for USSTRATCOM directed networks. FAB-T Command Center nodes will perform this function with no more than two FAB-Ts.	SECDEF voice conferencing will support the Milstar and AEHF CONOPS using up to twelve simultaneous voice networks. FAB-T will provide interfaces to support PNVC and Survivable Emergency Conferencing Network equipment. PNVC and SECN equipment are external to the FAB-T. Each nuclear Command Center node must be able to simultaneously support all services assigned to that node/platform as mandated in the Emergency Action Procedures of the Joint Staff Volume VII for Joint Staff directed networks and the USSTRATCOM Network Operating Instruction for USSTRATCOM directed networks. FAB-T Command Center nodes will perform this function with no more than two FAB-Ts.		conferencing will support the Milstar and AEHF CONOPS using up to twelve simultaneous voice networks. FAB-T will provide interfaces to support PNVC and Survivable Emergency Conferencing Network equipment. PNVC and SECN equipment are external to the FAB-T. Each nuclear Command Center node must be able to simultaneously support all services assigned to that node/platform as mandated in the Emergency Action Procedures of the Joint Staff Volume VII for Joint Staff directed networks and the USSTRATCOM Network Operating Instruction for USSTRATCOM directed networks. FAB-T Command Center nodes will perform this function with no more than two FAB-Ts.
Terminal Survivability: The FAB-T functions through the nuclear environment that the platform must endure.				
N/A	The FAB-T does not contribute to the protection of personnel or to the survivability of manned systems since it is not an occupied system. Protection for the FAB-T and its crew must be provided by external means (e.g. revetments, concealment, etc.). The manned and direct kinetic aspects of the mandatory Survivability KPP do not apply. The detectability and countermeasure aspects	(T=O) The FAB-T does not contribute to the protection of personnel or to the survivability of manned systems since it is not an occupied system. Protection for the FAB-T and its crew must be provided by external means (e.g. revetments, concealment, etc.). The manned and direct kinetic aspects of the mandatory Survivability KPP do not apply. The detectability and countermeasure aspects of the	TBD	The FAB-T does not contribute to the protection of personnel or to the survivability of manned systems since it is not an occupied system. Protection for the FAB-T and its crew must be provided by external means (e.g. revetments, concealment, etc.). The manned and direct kinetic aspects of the mandatory Survivability KPP do not apply. The detectability and countermeasure aspects

	of the Survivability KPP do apply and are defined here as the Terminal Survivability KPP, which has been tailored to the FAB-T mission environment. FAB-T is expected to survive and operate in CBRN environments. As such, the system is designated CBRN Mission Critical IAW DoDI 3150.09. Terminals supporting nuclear operations must be fully mission capable up to the maximum nuclear environment that the platform is expected to survive. Any recovery from circumvention required for a dose rate event will not be part of the EAM transmission timeline.	Survivability KPP do apply and are defined here as the Terminal Survivability KPP, which has been tailored to the FAB-T mission environment. FAB-T is expected to survive and operate in CBRN environments. As such, the system is designated CBRN Mission Critical IAW DoDI 3150.09. Terminals supporting nuclear operations must be fully mission capable up to the maximum nuclear environment that the platform is expected to survive. Any recovery from circumvention required for a dose rate event will not be part of the EAM transmission timeline.		of the Survivability KPP do apply and are defined here as the Terminal Survivability KPP, which has been tailored to the FAB-T mission environment. FAB-T is expected to survive and operate in CBRN environments. As such, the system is designated CBRN Mission Critical IAW DoDI 3150.09. Terminals supporting nuclear operations must be fully mission capable up to the maximum nuclear environment that the platform is expected to survive. Any recovery from circumvention required for a dose rate event will not be part of the EAM transmission timeline.
Capacity: Terminals must support data rates required by the airborne platforms and ground terminals missions utilizing the capabilities defined in the AEHF and Milstar Operational Requirements Documents (ORDs).				
N/A	The CPT will simultaneously support up to 47 services, including up to 30 Transmit/ Receive services, nine receive only services, and eight transmit only services. The terminal will support a cumulative transmit rate of at least 8.100 megabits per second (Mbps) and a cumulative receive rate of at least 17.700 Mbps. Terminals will include all equipment necessary to accept system data at data rates defined in the Milstar and AEHF satellite system ORDs as described in Table 7 of the CPD.	(T=O) The CPT will simultaneously support up to 47 services, including up to 30 Transmit/ Receive services, nine receive only services, and eight transmit only services. The terminal will support a cumulative transmit rate of at least 8.100 megabits per second (Mbps) and a cumulative receive rate of at least 17.700 Mbps. Terminals will include all equipment necessary to accept system data at data rates defined in the Milstar and AEHF satellite system ORDs as described in Table 7 of the CPD.	TBD	The CPT will simultaneously support up to 47 services, including up to 30 Transmit/ Receive services, nine receive only services, and eight transmit only services. The terminal will support a cumulative transmit rate of at least 8.100 megabits per second (Mbps) and a cumulative receive rate of at least 17.700 Mbps. Terminals will include all equipment necessary to accept system data at data rates defined in the Milstar and AEHF satellite system ORDs as described in Table 7 of the CPD.
Sustainment (Materiel Availability): Determined by system downtime, both planned and unplanned, requiring the early examination and determination of critical factors such as the total number of end items to be fielded and the major categories and drivers of system downtime. Per the operational concept, all				

FAB-T end items will be placed into operational service without terminal-level float spares. Terminal must sustain the overall reliability and availability requirements specified in the AEHF satellite system ORD. The Line Replaceable Units (LRUs) on the antenna system are included in the MRT. MRT does not apply to environments where personnel are required to wear Mission Oriented Protective Posture (MOPP) or cold weather gear.				
N/A	The FAB-T must meet the Reliability and Maintainability requirements as follows: Fixed Ground Command Post (CP) – 0.9957 Transportable CP – 0.9920 Airborne CP – 0.9884. MRT is the average on-equipment, organizational level corrective maintenance time to return a system to operational status. MRT (excluding the antenna/ pedestal) should not exceed 30 minutes. MRT will be achievable in a deployed environment.	(T=O) The FAB-T must meet the Reliability and Maintainability requirements as follows: Fixed Ground Command Post (CP) – 0.9957 Transportable CP – 0.9920 Airborne CP – 0.9884. MRT is the average on-equipment, organizational level corrective maintenance time to return a system to operational status. MRT (excluding the antenna/ pedestal) should not exceed 30 minutes. MRT will be achievable in a deployed environment.	TBD	The FAB-T must meet the Reliability and Maintainability requirements as follows: Fixed Ground Command Post (CP) – 0.9957 Transportable CP – 0.9920 Airborne CP – 0.9884. MRT is the average on-equipment, organizational level corrective maintenance time to return a system to operational status. MRT (excluding the antenna/ pedestal) should not exceed 30 minutes. MRT will be achievable in a deployed environment.
Training				
N/A	Using the Instructional Systems Development (ISD) process, the FAB-T program shall deliver a training system capable of developing, conducting, and controlling training without impacting operations. FAB-T training shall naturally extend and be consistent with existing CPT training delivered by Air Education and Training Command (AETC). The training system delivered by the FAB-T Program Office will comprise of technical data necessary for training (e.g. operations, maintenance and equipment manuals and/or TOs), Contract Special Training (Type 1), associated training	(T=O) Using the Instructional Systems Development (ISD) process, the FAB-T program shall deliver a training system capable of developing, conducting, and controlling training without impacting operations. FAB-T training shall naturally extend and be consistent with existing CPT training delivered by Air Education and Training Command (AETC). The training system delivered by the FAB-T Program Office will comprise of technical data necessary for training (e.g. operations, maintenance and equipment manuals and/or TOs), Contract Special Training (Type 1),	TBD	Using the Instructional Systems Development (ISD) process, the FAB-T program shall deliver a training system capable of developing, conducting, and controlling training without impacting operations. FAB-T training shall naturally extend and be consistent with existing CPT training delivered by Air Education and Training Command (AETC). The training system delivered by the FAB-T Program Office will comprise of technical data necessary for training (e.g. operations, maintenance and equipment manuals and/or TOs), Contract Special Training (Type 1), associated training

	course material, and installed and functional operational terminal(s) for AETC-provided training. AETC will implement FAB-T initial qualification training and AFSPC will implement unit qualification training. (U) Type 1 Training: Type 1 training shall provide operational and maintenance training to unit personnel, test agency personnel, initial AFSPC cadre, and AETC instructors prior to start of OT&E. Type 1 training shall continue until activation of AETC provided training. Training course(s) shall be tailored to meet the learning objectives of each duty position using the most cost-efficient training media, as determined by the AF ISD process. Type 1 training course material shall be delivered in Microsoft Office® editable format to applicable AFSPC and AETC units no later than 30 days after the completion of Type 1 training. Training Equipment and Material: The FAB T Program Office shall provide operational FAB-T hardware, Type 1 training material, and technical data to applicable AFSPC and AETC units for their development and implementation of AETC provided and unit qualification training. The operational hardware will be capable of performing 90% of operational tasks identified in the ISD	associated training course material, and installed and functional operational terminal(s) for AETC-provided training. AETC will implement FAB-T initial qualification training and AFSPC will implement unit qualification training. (U) Type 1 Training: Type 1 training shall provide operational and maintenance training to unit personnel, test agency personnel, initial AFSPC cadre, and AETC instructors prior to start of OT&E. Type 1 training shall continue until activation of AETC provided training. Training course(s) shall be tailored to meet the learning objectives of each duty position using the most cost-efficient training media, as determined by the AF ISD process. Type 1 training course material shall be delivered in Microsoft Office® editable format to applicable AFSPC and AETC units no later than 30 days after the completion of Type 1 training. Training Equipment and Material: The FAB T Program Office shall provide operational FAB-T hardware, Type 1 training material, and technical data to applicable AFSPC and AETC units for their development and implementation of AETC provided and unit qualification training. The operational hardware will be capable of performing 90% of operational tasks identified in the ISD		course material, and installed and functional operational terminal(s) for AETC-provided training. AETC will implement FAB-T initial qualification training and AFSPC will implement unit qualification training. (U) Type 1 Training: Type 1 training shall provide operational and maintenance training to unit personnel, test agency personnel, initial AFSPC cadre, and AETC instructors prior to start of OT&E. Type 1 training shall continue until activation of AETC provided training. Training course(s) shall be tailored to meet the learning objectives of each duty position using the most cost-efficient training media, as determined by the AF ISD process. Type 1 training course material shall be delivered in Microsoft Office® editable format to applicable AFSPC and AETC units no later than 30 days after the completion of Type 1 training. Training Equipment and Material: The FAB T Program Office shall provide operational FAB-T hardware, Type 1 training material, and technical data to applicable AFSPC and AETC units for their development and implementation of AETC provided and unit qualification training. The operational hardware will be capable of performing 90% of operational tasks identified in the ISD

	process.	process.		process.

Requirements Reference

CPD dated August 5, 2015

Change Explanations

None

Notes

The KPPs were updated in accordance with Joint Capabilities Integration and Development System guidance - supersedes KPPs reported in 2007 APB.

The following footnotes 1 through 4 apply to the above sections as listed:

CPT Control Interface: 1
CPT Backwards Compatibility: 2
CPT Existing Terminal Coexistence: 3
CPT Satellite Constellation Coexistences: 4

Footnotes:

1/ For FAB-T, access to privileged Tracking Telemetry and Control (TT&C) capabilities and resource controller capabilities is restricted through a minor hardware difference in the System INFOSEC Module (SIM) specific to TT&C nodes, mission planning data sets, and dedicated COMSEC algorithms and associated keys. Terminal software shall assign privileges to ensure that only designated terminals at TT&C nodes will have TT&C capabilities and that only designated terminals at resource controller nodes will have resource controller capabilities.

2/ The FAB-T interface to the Red Switch is via the Advanced Narrowband Digital Voice Terminal (ANDVT), and the interface to NPES is via SCIS.

3/ FAB-T complies with the CPT interoperability requirements defined in the Terminal Segment Specification for the Milstar II Satellite Communications Program SR-2300 (excluding Digital Secure Voice Terminal (DSVT) KY-68, Asynchronous T1, Demand Assignment Multiple Access (DAMA) Limited Beam Management, LDR Full Beam Management of default agile locations, and Medium Data Rate (MDR) Capabilities) and Joint Terminal Segment Specification for the EHF Satellite Communications Program SR-3300.

4/ Interoperability with UFO/E and UFO/EE is predicated on the development by the AEHF Program of the capability for the terminal to receive mission planning data and TRANSEC keys from the Mission Planning Element. FAB-T is not expected to produce or deploy the capability associated with Advanced Polar System satellite interoperability. Terminal modifications for Advanced Polar System satellites are not funded. Note: Advanced Polar System is now Enhanced Polar System.

Acronyms and Abbreviations

AEHF - Advanced Extremely High Frequency
AFCPT - Air Force Command Post Terminal
AFRB - Air Force Report Back
APS - Advanced Polar System
ASMCS - AEHF Satellite Mission Control Subsystem
BC - Backwards Compatible
CMS - Constellation Management System
CPT - Command Post Terminal
DAMA - Demand Assignment Multiple Access
DIACAP - DoD Information Assurance Certification & Accreditation Process
DIRECT - Defense IEMATS Replacement Command and Control Terminal
DMU - Dual Modem Unit
DoDI - Department of Defense Instruction
EAM - Emergency Action Message
EHF - Extremely High Frequency
FAB-T - Family of Advanced Beyond Line-of-Sight Terminals
FDM - Force Direction Message
FET - Force Element Terminal (formerly known as Airborne Wideband Terminal, or AWT)
FMC - Fully Mission Capable
IA - Information Assurance
IAW - In Accordance With
IEMATS - Improved Emergency Message Automatic Transmission System
IER - Information Exchange Requirement
LDR - Low Data Rate
MEECN - Minimum Essential Emergency Communications Network
MMA - Milstar Messaging Application
MMPU - Minuteman MEECN Program Update
MPSS - Mission Planning Sub System
NAST-T - Networked AEHF Satellite Test Tool
NC3 - Nuclear Command, Control & Communications
NMT - Navy Multi-Band Terminal
NPES - Nuclear Planning and Execution System
NRB - Navy Report Back
NSV - Nuclear Survivability and Vulnerability
OPU - Operator Processing Unit
PCMR - Probability of Correct Message Receipt
SCIS - Secure Communications Integrated System
SMART-T - Secure Mobile Anti-Jam Reliable Tactical Terminal
STIG - Security Technical Implementation Guidance
TT&C - Telemetry, Tracking & Control
UFO-E/EE - UHF Follow On - EHF/EHF Enhanced
UHF - Ultra High Frequency

FET

Performance Characteristics				
SAR Baseline Development Estimate	**Current APB Production Objective/Threshold**		**Demonstrated Performance**	**Current Estimate**
Interoperability				
Enable all top-level IERs, as depicted by mission area and designated critical between sending and receiving nodes	N/A	N/A	TBD	Enable all top-level IERs, as depicted by mission area and designated critical between sending and receiving nodes
Information Assurance				
Meet DoD IA criteria and be certified/ accredited IAW DoD 8510.1-M, DoD 8500.1, and DoDI 8500.2, or DoD certification and accreditation process at time of contract award	N/A	N/A	TBD	Meet DoD IA criteria and be certified/ accredited IAW DoD 8510.1-M, DoD 8500.1, and DoDI 8500.2, or DoD certification and accreditation process at time of contract award
Survivability				
FMC w/o damage/degradation, throughout the nuclear environment that the aircraft is expected to survive, while meeting PCMR requirements	N/A	N/A	TBD	FMC w/o damage/degradation, throughout the nuclear environment that the aircraft is expected to survive, while meeting PCMR requirements
FET Legacy Milstar Support				
Provide legacy Milstar dedicated connections to transmit/ receive functions associated with individual Milstar service/nets (Milstar LDR BC and AEHF equivalent BC)	N/A	N/A	TBD	Provide legacy Milstar dedicated connections to transmit/ receive functions associated with individual Milstar service/nets (Milstar LDR BC and AEHF equivalent BC)
FET Nuclear Interoperability				
Inter-operate with platform required JCS nuclear protected IER	N/A	N/A	TBD	Inter-operate with platform required JCS nuclear protected IER

FET Security Protection				
Protect all transmitted and received Information	N/A	N/A	TBD	Protect all transmitted and received Information
FET Security Levels				
Process and/or disseminate information products at any single level of classification up to and including TS/SCI	N/A	N/A	TBD	Process and/or disseminate information products at any single level of classification up to and including TS/SCI
FET Force Direction/Reportback				
Enable EAM dissemination and FE report back	N/A	N/A	TBD	Enable EAM dissemination and FE report back
Network Ready				
N/A	The system must fully support execution of all operational activities identified in the applicable joint and system integrated architectures. The system must also satisfy the technical requirements for Net-Centric military operations to include 1) Solution architecture products compliant with DoD Enterprise Architecture based on integrated DoD Defense Architecture Framework (DoDAF) content, including specified operational effective information exchanges 2) Compliant with Net-centric Data Strategy and Net-Centric Services Strategy, and the principles and rules identified in the DoD Information Enterprise Architecture (DoD IEA), excepting tactical and non-operational (OP) communications 3) Compliant with GIG	The system must fully support execution of joint critical operational activities identified in the applicable joint and system integrated architectures. The system must also satisfy the technical requirements for transition to Net-Centric military operations to include 1) Solution architecture products compliant with DoD Enterprise Architecture based on integrated DoD Defense Architecture Framework (DoDAF) content, including specified operational effective information exchanges 2) Compliant with Net-centric Data Strategy and Net-Centric Services Strategy, and the principles and rules identified in the DoD DoD IEA, excepting tactical and non-OP communications 3)	TBD	The system must fully support execution of all operational activities identified in the applicable joint and system integrated architectures. The system must also satisfy the technical requirements for Net-Centric military operations to include 1) Solution architecture products compliant with DoD Enterprise Architecture based on integrated DoD Defense Architecture Framework (DoDAF) content, including specified operational effective information exchanges 2) Compliant with Net-centric Data Strategy and Net-Centric Services Strategy, and the principles and rules identified in the DoD Information Enterprise Architecture (DoD IEA), excepting tactical and non-operational (OP) communications 3) Compliant with GIG Technical Guidance (GTG) to include Information Technology (IT) standards identified in the Standards

	Technical Guidance (GTG) to include Information Technology (IT) standards identified in the Standards Profile View (StdV-1) and implementation guidance GIG Enterprise Service Profiles (GESPs) necessary to meet all operational requirements specified in the DoD Enterprise Architecture and solution architecture views 4) Information assurance requirements including availability, integrity, authentication, confidentiality, and non-repudiation, and issuance of an Authorization to Operate (ATO) by the Designated Accrediting Authority (DAA), and 5) Supportability requirements to include Selective Availability Anti-spoofing Module (SAASM), Spectrum and Joint Tactical Radio System (JTRS) requirements.	Compliant GTG to include IT standards identified in the StdV-1 and implementation guidance of GESPs necessary to meet all operational requirements specified in the DoD Enterprise Architecture and solution architecture views 4) Information assurance requirements including availability, integrity, authentication, confidentiality, and non -repudiation, and issuance of an Interim Authorization to Operate (IATO) or ATO by the DAA, and 5) Supportability requirements to include Selective Availability Anti-spoofing Module (SAASM), Spectrum and JTRS requirements.		Profile View (StdV-1) and implementation guidance GIG Enterprise Service Profiles (GESPs) necessary to meet all operational requirements specified in the DoD Enterprise Architecture and solution architecture views 4) Information assurance requirements including availability, integrity, authentication, confidentiality, and non-repudiation, and issuance of an Authorization to Operate (ATO) by the Designated Accrediting Authority (DAA), and 5) Supportability requirements to include Selective Availability Anti-spoofing Module (SAASM), Spectrum and Joint Tactical Radio System (JTRS) requirements.
Strategic Services				
N/A	Terminals supporting nuclear/strategic operations will enable emergency action message dissemination while meeting the Probability of Correct Message Receipt (PCMR) requirements stated in Appendix F to Enclosure A CJCSI) 6811.01. Each Nuclear Command Center node or force element platform must be able	(T=O) Terminals supporting nuclear/strategic operations will enable emergency action message dissemination while meeting the Probability of Correct Message Receipt (PCMR) requirements stated in Appendix F to Enclosure A CJCSI) 6811.01. Each Nuclear Command Center node or force element	TBD	Terminals supporting nuclear/strategic operations will enable emergency action message dissemination while meeting the Probability of Correct Message Receipt (PCMR) requirements stated in Appendix F to Enclosure A CJCSI) 6811.01. Each Nuclear Command Center node or force element platform must be able to simultaneously support all services assigned to that

	to simultaneously support all services assigned to that node/platform as mandated in the Emergency Action Procedures of the Joint Staff directed networks and the USSTRATCOM Network Operating Instruction for USSTRATCOM directed networks. FE platforms will be required to perform this function with a single FAB-T.	platform must be able to simultaneously support all services assigned to that node/platform as mandated in the Emergency Action Procedures of the Joint Staff directed networks and the USSTRATCOM Network Operating Instruction for USSTRATCOM directed networks. FE platforms will be required to perform this function with a single FAB-T.		node/platform as mandated in the Emergency Action Procedures of the Joint Staff directed networks and the USSTRATCOM Network Operating Instruction for USSTRATCOM directed networks. FE platforms will be required to perform this function with a single FAB-T.
Terminal Survivability				
N/A	Terminals supporting nuclear operations must be fully mission capable up to the maximum nuclear environment that the platform is expected to survive. Any recovery from circumvention required for a dose rate event will not be part of the Emergency Action Message (EAM) transmission timeline.	(T=O) Terminals supporting nuclear operations must be fully mission capable up to the maximum nuclear environment that the platform is expected to survive. Any recovery from circumvention required for a dose rate event will not be part of the Emergency Action Message (EAM) transmission timeline.	TBD	Terminals supporting nuclear operations must be fully mission capable up to the maximum nuclear environment that the platform is expected to survive. Any recovery from circumvention required for a dose rate event will not be part of the Emergency Action Message (EAM) transmission timeline.
Capacity				
N/A	The FET, in conjunction with ancillary cryptographic equipment, will support up to seven simultaneous protected EHF networks (Point-to-Point [PTP] calls, conference networks, reportback service, and simplex broadcast service). Terminals will include all equipment necessary to accept system data rates defined in the Milstar	(T=O) The FET, in conjunction with ancillary cryptographic equipment, will support up to seven simultaneous protected EHF networks (Point-to-Point [PTP] calls, conference networks, reportback service, and simplex broadcast service). Terminals will include all equipment necessary to accept system data rates	TBD	The FET, in conjunction with ancillary cryptographic equipment, will support up to seven simultaneous protected EHF networks (Point-to-Point [PTP] calls, conference networks, reportback service, and simplex broadcast service). Terminals will include all equipment necessary to accept system data rates defined in the Milstar and AEHF satellite system ORDs and EPS CDD as described in

	and AEHF satellite system ORDs and EPS CDD as described in Table 4 of the CDD.	defined in the Milstar and AEHF satellite system ORDs and EPS CDD as described in Table 4 of the CDD.		Table 4 of the CDD.
Sustainment				
N/A	The FAB-T FET must meet a Reliability, Maintainability and Dependability requirement of 0.9923. Mean Repair Time (MRT) is the average on-equipment, organizational level corrective maintenance time to return a system to operational status. The MRT (excluding the antenna/pedestal) will not exceed 15 minutes. MRT will be achievable in a deployed environment.	The FAB-T FET must meet a Reliability, Maintainability and Dependability requirement of 0.9923. Mean Repair Time (MRT) is the average on-equipment, organizational level corrective maintenance time to return a system to operational status. The MRT (excluding the antenna/pedestal) should not exceed 30 minutes. MRT will be achievable in a deployed environment.	TBD	The FAB-T FET must meet a Reliability, Maintainability and Dependability requirement of 0.9923. Mean Repair Time (MRT) is the average on-equipment, organizational level corrective maintenance time to return a system to operational status. The MRT (excluding the antenna/pedestal) will not exceed 15 minutes. MRT will be achievable in a deployed environment.
Training				
N/A	Contractor is developing Type 1 operator and maintainer course material along with Computer Based Training as part of the development contract. Training materials will be supplied to all services. A joint Training Program need not be developed.	(T=O) Contractor is developing Type 1 operator and maintainer course material along with Computer Based Training as part of the development contract. Training materials will be supplied to all services. A joint Training Program need not be developed.	TBD	Contractor is developing Type 1 operator and maintainer course material along with Computer Based Training as part of the development contract. Training materials will be supplied to all services. A joint Training Program need not be developed.

Requirements Reference

CDD dated February 15, 2013

Change Explanations

None

Notes

The KPPs were updated in accordance with Joint Capabilities Integration and Development System guidance - supersedes KPPs reported in 2007 APB.

This section is TBD at this time. While the FET remains a valid requirement for the FAB-T program, it is currently unfunded and the Air Force has not yet finalized its strategy for FET development.

The following footnotes 1 & 2 apply to the above sections as listed:

Interoperability: 2
Information Assurance: 2
Survivability: 2
FET Legacy Milstar Support: 2
FET Nuclear Interoperability: 2
FET Security Protection: 2
FET Security Levels: 1 & 2
FET Force Direction/Reportback: 2

1/ Threshold requirements (single level security) placed on contract; objective requirements (multi-level security) not proposed by contractor. This performance parameter only applies to the FET configuration.

2/ The LDR System provided to the strategic forces must meet the following Performance parameters in Section A: Interoperability, Information Assurance, Survivability, FET Legacy Milstar, FET Nuclear Interoperability, FET Security Protection, FET Security Levels, and FET Force Direction/Reportback. The Extended Data Rate (XDR) System must meet all the Performance parameters in Section A.

Acronyms and Abbreviations

AEHF - Advanced Extremely High Frequency
AWT - Advanced Wideband Terminal
BC - Backward Compatibility
DoDI - Department of Defense Instruction
EAM - Emergency Action Message
FE - Force Element
FET - Force Element Terminal
FMC - Fully Mission Capable
IA - Information Assurance
IER - Information Exchange Requirement
JCS - Joint Chiefs of Staff
LDR - Low Data Rate
ORD - Operational Requirement Document
PCMR - Probability of Correct Message Receipt
SCI - Sensitive Compartmented Information
TS - Top Secret
w/o - without
XDR - Extended Data Rate

Track to Budget

CPT

General Notes

The appropriation 3021 (Space Procurement, Air Force) which was not part of the previous SAR has been added in place of 3080 for FY16-21 based on the current Air Force funding position.

RDT&E

Appn		BA	PE		
Air Force	3600	07	0303001F		
	Project		**Name**		
	672490		Family of Adv Beyond Line of Sight Terminals (FAB-T)		
Air Force	3600	07	0303601F		
	Project		**Name**		
	672487		MILSATCOM Terminals	(Shared)	(Sunk)
	672489		FAB-T Alternative		(Sunk)
	672490		Family of Adv Beyond Line of Sight Terminals (FAB-T)		(Sunk)

Procurement

Appn		BA	PE		
Air Force	3010	06	0303001F		
	Line Item		**Name**		
	000999		Initial Spares/Repair Parts	(Shared)	
Air Force	3010	06	0303601F		
	Line Item		**Name**		
	000999		Initial Spares/Repair Parts	(Shared)	(Sunk)
Air Force	3010	05	0303601F		
	Line Item		**Name**		
	FBLOST		Family of Beyond Line-of-Sight Terminals		(Sunk)
Air Force	3010	05	0303001F		
	Line Item		**Name**		
	FBLOST		Family of Beyond Line-of-Sight Terminals		
Air Force	3010	05	0303601F		
	Line Item		**Name**		
	OTHACF		Other Aircraft	(Shared)	(Sunk)
Air Force	3021	01	0303001F		
	Line Item		**Name**		
	FBLOST		Family of Advanced Beyond Line of Sight Terminals		

Air Force	3021	02	0303001F		
	Line Item		**Name**		
	SSPARE		Initial Spares/Repair Parts	(Shared)	
Air Force	3080	03	0303001F		
	Line Item		**Name**		
	836700		Family of Beyond Line-of-Sight Terminals		(Sunk)
Air Force	3080	03	0303601F		
	Line Item		**Name**		
	836700		Family of Beyond Line-of-Sight Terminals		(Sunk)
	836780		MILSATCOM Space	(Shared)	(Sunk)
Air Force	3080	05	0303001F		
	Line Item		**Name**		
	861900		Spares and Repair Parts	(Shared)	
Air Force	3080	05	0303601F		
	Line Item		**Name**		
	861900		Spares and Repair Parts	(Shared)	(Sunk)

Notes

FAB-T shares the Other Aircraft (OTHACF) line item with other modification programs. Procurement funding for six terminals for the President of the United States aircraft are included in OTHACF line item. Procurement funding for all other FAB-T airborne terminals are included in the Family of Beyond Line-of-Sight Terminals (FBLOST) line item. FAB-T shares the 000999 SSPARE Initial Spares line item with other programs, and shares 836780 with other Military Satellite Communication (MILSATCOM) programs.

FET

General Notes

The appropriation 3021 (Space Procurement, Air Force) which was not part of the previous SAR has been added in place of 3080 based on the current Air Force funding position for CPT.

RDT&E

Appn	BA	PE		
Air Force	3600	07	0303001F	
	Project		**Name**	
	672490		Family of Adv Beyond Line of Sight Terminals (FAB-T)	
Air Force	3600	07	0303601F	
	Project		**Name**	
	672487		MILSATCOM Terminals	(Shared) (Sunk)
	672489		FAB-T Alternative	(Sunk)
	672490		Family of Adv Beyond Line of Sight Terminals (FAB-T)	(Sunk)

Procurement

Appn	BA	PE

Air Force	3010	06	0303001F		
	Line Item		**Name**		
	000999		Initial Spares/Repair Parts	(Shared)	
Air Force	3010	06	0303601F		
	Line Item		**Name**		
	000999		Initial Spares/Repair Parts	(Shared)	(Sunk)
Air Force	3010	05	0303601F		
	Line Item		**Name**		
	FBLOST		Family of Beyond Line-of-Sight Terminals		(Sunk)
Air Force	3010	05	0303001F		
	Line Item		**Name**		
	FBLOST		Family of Beyond Line-of-Sight Terminals		
Air Force	3010	05	0303601F		
	Line Item		**Name**		
	OTHACF		Other Aircraft	(Shared)	(Sunk)
Air Force	3021	01	0303001F		
	Line Item		**Name**		
	FBLOST		Family of Advanced Beyond Line-of-Sight Terminals		
Air Force	3021	02	0303001F		
	Line Item		**Name**		
	SSPARE		Initial Spares/Repair Parts	(Shared)	
Air Force	3080	03	0303001F		
	Line Item		**Name**		
	836700		Family of Beyond Line-of-Sight Terminals		(Sunk)
Air Force	3080	03	0303601F		
	Line Item		**Name**		
	836700		Family of Beyond Line-of-Sight Terminals		(Sunk)
	836780		MILSATCOM Space	(Shared)	(Sunk)
Air Force	3080	05	0303001F		
	Line Item		**Name**		
	861900		Spares and Repair Parts	(Shared)	
Air Force	3080	05	0303601F		
	Line Item		**Name**		
	861900		Spares and Repair Parts	(Shared)	(Sunk)

Notes

FAB-T shares the Other Aircraft (OTHACF) line item with other modification programs. Procurement funding for six terminals for the President of the United States aircraft are included in OTHACF line item. Procurement funding for all other FAB-T airborne terminals are included in the Family of Beyond Line-of-Sight Terminals (FBLOST) line item. FAB-T shares the 000999 and SSPARE Initial Spares line item with other programs, and shares 836780 with other Military Satellite Communication (MILSATCOM) programs.

Cost and Funding

Cost Summary - Total Program

Total Acquisition Cost - Total Program							
Appropriation	BY 2015 $M			BY 2015 $M	TY $M		
	SAR Baseline Development Estimate	Current APB Production Objective/Threshold		Current Estimate	SAR Baseline Development Estimate	Current APB Production Objective	Current Estimate
RDT&E	1273.8	3083.1	--	2987.2	1431.1	2924.7	2909.1
Procurement	1368.6	1459.0	--	1399.7	1736.3	1688.9	1723.5
Flyaway	--	--	--	930.6	--	--	1139.2
Recurring	--	--	--	930.6	--	--	1139.2
Non Recurring	--	--	--	0.0	--	--	0.0
Support	--	--	--	469.1	--	--	584.3
Other Support	--	--	--	143.2	--	--	177.1
Initial Spares	--	--	--	325.9	--	--	407.2
MILCON	0.0	0.0	--	0.0	0.0	0.0	0.0
Acq O&M	0.0	0.0	--	0.0	0.0	0.0	0.0
Total	2642.4	4542.1	N/A	4386.9	3167.4	4613.6	4632.6

Cost and Funding

Cost Summary - CPT

Total Acquisition Cost - CPT							
Appropriation	BY 2015 $M			BY 2015 $M	TY $M		
	SAR Baseline Development Estimate	Current APB Production Objective/Threshold		Current Estimate	SAR Baseline Development Estimate	Current APB Production Objective	Current Estimate
RDT&E	633.2	1159.0	1274.9	1140.9	556.5	1075.7	1060.0
Procurement	667.1	584.0	642.4	618.9	666.9	622.4	656.9
Flyaway	--	--	--	431.6	--	--	458.9
Recurring	--	--	--	431.6	--	--	458.9
Non Recurring	--	--	--	0.0	--	--	0.0
Support	--	--	--	187.3	--	--	198.0
Other Support	--	--	--	71.4	--	--	76.1
Initial Spares	--	--	--	115.9	--	--	121.9
MILCON	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Acq O&M	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total	1300.3	1743.0	N/A	1759.8	1223.4	1698.1	1716.9

Current APB Cost Estimate Reference

Air Force SCP dated July 07, 2015

Confidence Level

Confidence Level of cost estimate for current APB: 55%

A mathematically derived confidence level was not computed for this life-cycle cost estimate (LCCE). This LCCE represents the expected value, taking into consideration relevant risks, including ordinary levels of external and unforeseen events. It aims to provide sufficient resources to execute the program under normal conditions encountering average levels of technical, schedule, and programmatic risk and external influence

The Base Year for the program has been updated from FY 2002 to FY 2015 using the following deflators:

Appn Category	Deflation Factor
RDT&E	1.27811861
Procurement	1.27811861

Cost Notes

The CPT and FET program were combined in the 2014 SAR and are now broken into subprograms to reflect the March 3, 2016 APB.

Total Quantity - CPT			
Quantity	**SAR Baseline Development Estimate**	**Current APB Production**	**Current Estimate**
RDT&E	10	25	25
Procurement	76	84	84
Total	86	109	109

Quantity Notes

For CPT there are a total of 109 systems, which includes 25 EDMs (12 Boeing and 13 Raytheon) and 84 production systems. All quantities shown reflect the program baseline as approved in the Milestone C ADM.

Cost Summary - FET

Total Acquisition Cost - FET							
Appropriation	BY 2015 $M			BY 2015 $M	TY $M		
	SAR Baseline Development Estimate	Current APB Development Objective/Threshold		Current Estimate	SAR Baseline Development Estimate	Current APB Development Objective	Current Estimate
RDT&E	994.9	1924.1	2116.5	1846.3	874.6	1849.0	1849.1
Procurement	1082.2	875.0	962.5	780.8	1069.4	1066.5	1066.6
Flyaway	--	--	--	499.0	--	--	680.3
Recurring	--	--	--	499.0	--	--	680.3
Non Recurring	--	--	--	0.0	--	--	0.0
Support	--	--	--	281.8	--	--	386.3
Other Support	--	--	--	71.8	--	--	101.0
Initial Spares	--	--	--	210.0	--	--	285.3
MILCON	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Acq O&M	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total	2077.1	2799.1	N/A	2627.1	1944.0	2915.5	2915.7

Current APB Cost Estimate Reference

Air Force SCP dated July 07, 2015

Confidence Level

Confidence Level of cost estimate for current APB: 54%

A mathematically derived confidence level was not computed for this life-cycle cost estimate (LCCE). This LCCE represents the expected value, taking into consideration relevant risks, including ordinary levels of external and unforeseen events. It aims to provide sufficient resources to execute the program under normal conditions encountering average levels of technical, schedule, and programmatic risk and external influence

The Base Year for the program has been updated from FY 2002 to FY 2015 using the following deflators:

Appn Category	Deflation Factor
RDT&E	1.27811861
Procurement	1.27811861

Cost Notes

The CPT and FET program were combined in the 2014 SAR and are now broken into subprograms to reflect the March 3, 2016 APB.

Total Quantity - FET			
Quantity	**SAR Baseline Development Estimate**	**Current APB Development**	**Current Estimate**
RDT&E	15	26	26
Procurement	115	132	132
Total	130	158	158

Quantity Notes

There are 158 FETs planned, which includes 26 EDM terminals (18 from the original Boeing contract and 8 for the future program) and 132 procurement terminals all associated with the future program.

Cost and Funding

Funding Summary - Total Program

Appropriation Summary									
FY 2017 President's Budget / December 2015 SAR (TY$ M)									
Appropriation	Prior	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	To Complete	Total
RDT&E	2247.7	3.9	14.6	0.0	0.0	0.0	0.0	642.9	2909.1
Procurement	142.6	143.7	111.2	152.3	62.6	34.3	10.2	1066.6	1723.5
MILCON	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Acq O&M	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
PB 2017 Total	2390.3	147.6	125.8	152.3	62.6	34.3	10.2	1709.5	4632.6
PB 2016 Total	2457.7	175.4	179.4	60.5	89.5	150.1	130.9	1021.2	4264.7
Delta	-67.4	-27.8	-53.6	91.8	-26.9	-115.8	-120.7	688.3	367.9

Cost and Funding

Funding Summary - CPT

Appropriation Summary									
FY 2017 President's Budget / December 2015 SAR (TY$ M)									
Appropriation	Prior	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	To Complete	Total
RDT&E	1041.5	3.9	14.6	0.0	0.0	0.0	0.0	0.0	1060.0
Procurement	142.6	143.7	111.2	152.3	62.6	34.3	10.2	0.0	656.9
MILCON	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Acq O&M	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
PB 2017 Total	1184.1	147.6	125.8	152.3	62.6	34.3	10.2	0.0	1716.9
PB 2016 Total	--	--	--	--	--	--	--	--	0.0
Delta	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1716.9

Funding Notes

For FY 2016, PB funding was not previously broken out between the subprograms for CPT and FET.

Quantity Summary										
FY 2017 President's Budget / December 2015 SAR (TY$ M)										
Quantity	Undistributed	Prior	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	To Complete	Total
Development	25	0	0	0	0	0	0	0	0	25
Production	0	19	20	17	26	2	0	0	0	84
PB 2017 Total	25	19	20	17	26	2	0	0	0	109
PB 2016 Total	0	0	0	0	0	0	0	0	0	0
Delta	25	19	20	17	26	2	0	0	0	109

Funding Summary - FET

Appropriation Summary									
FY 2017 President's Budget / December 2015 SAR (TY$ M)									
Appropriation	Prior	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	To Complete	Total
RDT&E	1206.2	0.0	0.0	0.0	0.0	0.0	0.0	642.9	1849.1
Procurement	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1066.6	1066.6
MILCON	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Acq O&M	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
PB 2017 Total	1206.2	0.0	0.0	0.0	0.0	0.0	0.0	1709.5	2915.7
PB 2016 Total	--	--	--	--	--	--	--	--	0.0
Delta	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2915.7

Funding Notes

For FY 2016, PB funding was not previously broken out between the subprograms for CPT and FET.

Follow-on Development and Production of FET to be procured beyond the FYDP.

Quantity Summary										
FY 2017 President's Budget / December 2015 SAR (TY$ M)										
Quantity	Undistributed	Prior	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	To Complete	Total
Development	26	0	0	0	0	0	0	0	0	26
Production	0	0	0	0	0	0	0	0	132	132
PB 2017 Total	26	0	0	0	0	0	0	0	132	158
PB 2016 Total	0	0	0	0	0	0	0	0	0	0
Delta	26	0	0	0	0	0	0	0	132	158

Cost and Funding

Annual Funding By Appropriation - CPT

Annual Funding - CPT 3600 | RDT&E | Research, Development, Test, and Evaluation, Air Force							
Fiscal Year	Quantity	TY $M					
		End Item Recurring Flyaway	Non End Item Recurring Flyaway	Non Recurring Flyaway	Total Flyaway	Total Support	Total Program
2001	--	--	--	--	--	--	2.1
2002	--	--	--	--	--	--	4.1
2003	--	--	--	--	--	--	20.2
2004	--	--	--	--	--	--	44.6
2005	--	--	--	--	--	--	67.3
2006	--	--	--	--	--	--	76.3
2007	--	--	--	--	--	--	75.1
2008	--	--	--	--	--	--	108.0
2009	--	--	--	--	--	--	81.7
2010	--	--	--	--	--	--	73.7
2011	--	--	--	--	--	--	102.6
2012	--	--	--	--	--	--	161.5
2013	--	--	--	--	--	--	47.6
2014	--	--	--	--	--	--	118.8
2015	--	--	--	--	--	--	57.9
2016	--	--	--	--	--	--	3.9
2017	--	--	--	--	--	--	14.6
Subtotal	25	--	--	--	--	--	1060.0

Annual Funding - CPT 3600 | RDT&E | Research, Development, Test, and Evaluation, Air Force							
Fiscal Year	Quantity	BY 2015 $M					
		End Item Recurring Flyaway	Non End Item Recurring Flyaway	Non Recurring Flyaway	Total Flyaway	Total Support	Total Program
2001	--	--	--	--	--	--	2.7
2002	--	--	--	--	--	--	5.2
2003	--	--	--	--	--	--	25.1
2004	--	--	--	--	--	--	54.1
2005	--	--	--	--	--	--	79.6
2006	--	--	--	--	--	--	87.7
2007	--	--	--	--	--	--	84.1
2008	--	--	--	--	--	--	118.5
2009	--	--	--	--	--	--	88.5
2010	--	--	--	--	--	--	78.8
2011	--	--	--	--	--	--	107.7
2012	--	--	--	--	--	--	166.5
2013	--	--	--	--	--	--	48.3
2014	--	--	--	--	--	--	118.9
2015	--	--	--	--	--	--	57.4
2016	--	--	--	--	--	--	3.8
2017	--	--	--	--	--	--	14.0
Subtotal	25	--	--	--	--	--	1140.9

Annual Funding - CPT 3010 | Procurement | Aircraft Procurement, Air Force							
Fiscal Year	Quantity	TY $M					
		End Item Recurring Flyaway	Non End Item Recurring Flyaway	Non Recurring Flyaway	Total Flyaway	Total Support	Total Program
2007	--	4.3	--	--	4.3	--	4.3
2008	--	--	--	--	--	--	--
2009	--	--	--	--	--	--	--
2010	--	1.3	--	--	1.3	--	1.3
2011	--	--	--	--	--	--	--
2012	--	3.7	--	--	3.7	--	3.7
2013	--	4.6	--	--	4.6	--	4.6
2014	--	1.9	--	--	1.9	--	1.9
2015	10	47.7	--	--	47.7	13.6	61.3
2016	8	40.0	--	--	40.0	7.1	47.1
2017	1	2.6	--	--	2.6	5.6	8.2
2018	2	19.6	--	--	19.6	3.9	23.5
2019	2	11.8	--	--	11.8	8.8	20.6
2020	--	1.5	--	--	1.5	0.5	2.0
2021	--	1.6	--	--	1.6	--	1.6
Subtotal	23	140.6	--	--	140.6	39.5	180.1

Annual Funding - CPT 3010 | Procurement | Aircraft Procurement, Air Force							
Fiscal Year	Quantity	BY 2015 $M					
		End Item Recurring Flyaway	Non End Item Recurring Flyaway	Non Recurring Flyaway	Total Flyaway	Total Support	Total Program
2007	--	4.7	--	--	4.7	--	4.7
2008	--	--	--	--	--	--	--
2009	--	--	--	--	--	--	--
2010	--	1.4	--	--	1.4	--	1.4
2011	--	--	--	--	--	--	--
2012	--	3.8	--	--	3.8	--	3.8
2013	--	4.6	--	--	4.6	--	4.6
2014	--	1.9	--	--	1.9	--	1.9
2015	10	46.1	--	--	46.1	13.2	59.3
2016	8	38.0	--	--	38.0	6.7	44.7
2017	1	2.4	--	--	2.4	5.2	7.6
2018	2	17.9	--	--	17.9	3.6	21.5
2019	2	10.6	--	--	10.6	7.8	18.4
2020	--	1.3	--	--	1.3	0.5	1.8
2021	--	1.4	--	--	1.4	--	1.4
Subtotal	23	134.1	--	--	134.1	37.0	171.1

Cost Quantity Information - CPT 3010 | Procurement | Aircraft Procurement, Air Force		
Fiscal Year	**Quantity**	**End Item Recurring Flyaway (Aligned With Quantity) BY 2015 $M**
2007	--	--
2008	--	--
2009	--	--
2010	--	--
2011	--	--
2012	--	--
2013	--	--
2014	--	--
2015	10	58.3
2016	8	46.6
2017	1	5.8
2018	2	11.7
2019	2	11.7
2020	--	--
2021	--	--
Subtotal	23	134.1

Annual Funding - CPT 3080 | Procurement | Other Procurement, Air Force							
Fiscal Year	Quantity	TY $M					
		End Item Recurring Flyaway	Non End Item Recurring Flyaway	Non Recurring Flyaway	Total Flyaway	Total Support	Total Program
2010	--	1.9	--	--	1.9	--	1.9
2011	--	--	--	--	--	--	--
2012	--	--	--	--	--	--	--
2013	--	5.0	--	--	5.0	--	5.0
2014	--	0.4	--	--	0.4	2.9	3.3
2015	9	43.1	--	--	43.1	12.2	55.3
2016	--	--	--	--	--	44.4	44.4
Subtotal	9	50.4	--	--	50.4	59.5	109.9

Annual Funding - CPT 3080 | Procurement | Other Procurement, Air Force							
Fiscal Year	Quantity	BY 2015 $M					
		End Item Recurring Flyaway	Non End Item Recurring Flyaway	Non Recurring Flyaway	Total Flyaway	Total Support	Total Program
2010	--	2.0	--	--	2.0	--	2.0
2011	--	--	--	--	--	--	--
2012	--	--	--	--	--	--	--
2013	--	5.1	--	--	5.1	--	5.1
2014	--	0.4	--	--	0.4	2.9	3.3
2015	9	42.7	--	--	42.7	12.1	54.8
2016	--	--	--	--	--	43.4	43.4
Subtotal	9	50.2	--	--	50.2	58.4	108.6

Cost Quantity Information - CPT 3080 | Procurement | Other Procurement, Air Force		
Fiscal Year	**Quantity**	**End Item Recurring Flyaway (Aligned With Quantity) BY 2015 $M**
2010	--	--
2011	--	--
2012	--	--
2013	--	--
2014	--	--
2015	9	50.2
2016	--	--
Subtotal	9	50.2

Annual Funding - CPT 3021 | Procurement | Space Procurement, Air Force							
Fiscal Year	Quantity	TY $M					
		End Item Recurring Flyaway	Non End Item Recurring Flyaway	Non Recurring Flyaway	Total Flyaway	Total Support	Total Program
2016	12	31.9	--	--	31.9	20.3	52.2
2017	16	74.6	--	--	74.6	28.4	103.0
2018	24	108.8	--	--	108.8	20.0	128.8
2019	--	12.9	--	--	12.9	29.1	42.0
2020	--	31.1	--	--	31.1	1.2	32.3
2021	--	8.6	--	--	8.6	--	8.6
Subtotal	52	267.9	--	--	267.9	99.0	366.9

Annual Funding - CPT 3021 | Procurement | Space Procurement, Air Force							
Fiscal Year	Quantity	BY 2015 $M					
		End Item Recurring Flyaway	Non End Item Recurring Flyaway	Non Recurring Flyaway	Total Flyaway	Total Support	Total Program
2016	12	30.5	--	--	30.5	19.4	49.9
2017	16	70.0	--	--	70.0	26.7	96.7
2018	24	100.2	--	--	100.2	18.4	118.6
2019	--	11.6	--	--	11.6	26.3	37.9
2020	--	27.5	--	--	27.5	1.1	28.6
2021	--	7.5	--	--	7.5	--	7.5
Subtotal	52	247.3	--	--	247.3	91.9	339.2

Cost Quantity Information - CPT 3021 | Procurement | Space Procurement, Air Force		
Fiscal Year	**Quantity**	**End Item Recurring Flyaway (Aligned With Quantity) BY 2015 $M**
2016	12	57.1
2017	16	76.1
2018	24	114.1
2019	--	--
2020	--	--
2021	--	--
Subtotal	52	247.3

Annual Funding By Appropriation - FET

Annual Funding - FET 3600 | RDT&E | Research, Development, Test, and Evaluation, Air Force							
Fiscal Year	Quantity	TY $M					
		End Item Recurring Flyaway	Non End Item Recurring Flyaway	Non Recurring Flyaway	Total Flyaway	Total Support	Total Program
2001	--	--	--	--	--	--	3.2
2002	--	--	--	--	--	--	6.4
2003	--	--	--	--	--	--	31.7
2004	--	--	--	--	--	--	70.1
2005	--	--	--	--	--	--	105.8
2006	--	--	--	--	--	--	119.9
2007	--	--	--	--	--	--	117.9
2008	--	--	--	--	--	--	169.7
2009	--	--	--	--	--	--	128.4
2010	--	--	--	--	--	--	115.8
2011	--	--	--	--	--	--	161.3
2012	--	--	--	--	--	--	118.7
2013	--	--	--	--	--	--	50.2
2014	--	--	--	--	--	--	7.1
2015	--	--	--	--	--	--	--
2016	--	--	--	--	--	--	--
2017	--	--	--	--	--	--	--
2018	--	--	--	--	--	--	--
2019	--	--	--	--	--	--	--
2020	--	--	--	--	--	--	--
2021	--	--	--	--	--	--	--
2022	--	--	--	--	--	--	--
2023	--	--	--	--	--	--	6.9
2024	--	--	--	--	--	--	8.3
2025	--	--	--	--	--	--	192.7
2026	--	--	--	--	--	--	237.0
2027	--	--	--	--	--	--	147.1
2028	--	--	--	--	--	--	49.5
2029	--	--	--	--	--	--	0.8
2030	--	--	--	--	--	--	0.6
Subtotal	26	--	--	--	--	--	1849.1

Annual Funding - FET 3600 | RDT&E | Research, Development, Test, and Evaluation, Air Force							
Fiscal Year	Quantity	BY 2015 $M					
		End Item Recurring Flyaway	Non End Item Recurring Flyaway	Non Recurring Flyaway	Total Flyaway	Total Support	Total Program
2001	--	--	--	--	--	--	4.1
2002	--	--	--	--	--	--	8.1
2003	--	--	--	--	--	--	39.5
2004	--	--	--	--	--	--	85.1
2005	--	--	--	--	--	--	125.1
2006	--	--	--	--	--	--	137.7
2007	--	--	--	--	--	--	132.0
2008	--	--	--	--	--	--	186.2
2009	--	--	--	--	--	--	139.1
2010	--	--	--	--	--	--	123.8
2011	--	--	--	--	--	--	169.3
2012	--	--	--	--	--	--	122.4
2013	--	--	--	--	--	--	50.9
2014	--	--	--	--	--	--	7.1
2015	--	--	--	--	--	--	--
2016	--	--	--	--	--	--	--
2017	--	--	--	--	--	--	--
2018	--	--	--	--	--	--	--
2019	--	--	--	--	--	--	--
2020	--	--	--	--	--	--	--
2021	--	--	--	--	--	--	--
2022	--	--	--	--	--	--	--
2023	--	--	--	--	--	--	5.9
2024	--	--	--	--	--	--	6.9
2025	--	--	--	--	--	--	157.9
2026	--	--	--	--	--	--	190.3
2027	--	--	--	--	--	--	115.7
2028	--	--	--	--	--	--	38.2
2029	--	--	--	--	--	--	0.6
2030	--	--	--	--	--	--	0.4
Subtotal	26	--	--	--	--	--	1846.3

Annual Funding - FET 3010 | Procurement | Aircraft Procurement, Air Force							
Fiscal Year	Quantity	TY $M					
		End Item Recurring Flyaway	Non End Item Recurring Flyaway	Non Recurring Flyaway	Total Flyaway	Total Support	Total Program
2027	8	50.4	--	--	50.4	21.7	72.1
2028	30	157.8	--	--	157.8	68.9	226.7
2029	42	179.4	--	--	179.4	108.0	287.4
2030	43	171.7	--	--	171.7	108.7	280.4
2031	--	19.4	--	--	19.4	17.6	37.0
2032	--	19.9	--	--	19.9	17.3	37.2
2033	--	18.7	--	--	18.7	13.5	32.2
2034	--	6.6	--	--	6.6	2.2	8.8
Subtotal	123	623.9	--	--	623.9	357.9	981.8

Annual Funding - FET 3010 | Procurement | Aircraft Procurement, Air Force							
Fiscal Year	Quantity	BY 2015 $M					
		End Item Recurring Flyaway	Non End Item Recurring Flyaway	Non Recurring Flyaway	Total Flyaway	Total Support	Total Program
2027	8	38.5	--	--	38.5	16.6	55.1
2028	30	118.3	--	--	118.3	51.6	169.9
2029	42	131.7	--	--	131.7	79.3	211.0
2030	43	123.7	--	--	123.7	78.3	202.0
2031	--	13.7	--	--	13.7	12.4	26.1
2032	--	13.8	--	--	13.8	12.0	25.8
2033	--	12.7	--	--	12.7	9.1	21.8
2034	--	4.4	--	--	4.4	1.5	5.9
Subtotal	123	456.8	--	--	456.8	260.8	717.6

Cost Quantity Information - FET 3010 | Procurement | Aircraft Procurement, Air Force		
Fiscal Year	**Quantity**	**End Item Recurring Flyaway (Aligned With Quantity) BY 2015 $M**
2027	8	29.7
2028	30	111.4
2029	42	156.0
2030	43	159.7
2031	--	--
2032	--	--
2033	--	--
2034	--	--
Subtotal	123	456.8

Annual Funding - FET 3021 | Procurement | Space Procurement, Air Force							
Fiscal Year	Quantity	TY $M					
		End Item Recurring Flyaway	Non End Item Recurring Flyaway	Non Recurring Flyaway	Total Flyaway	Total Support	Total Program
2027	2	11.7	--	--	11.7	4.8	16.5
2028	4	19.7	--	--	19.7	9.4	29.1
2029	3	15.4	--	--	15.4	8.4	23.8
2030	--	3.7	--	--	3.7	1.2	4.9
2031	--	1.8	--	--	1.8	1.6	3.4
2032	--	1.8	--	--	1.8	1.6	3.4
2033	--	1.7	--	--	1.7	1.2	2.9
2034	--	0.6	--	--	0.6	0.2	0.8
Subtotal	9	56.4	--	--	56.4	28.4	84.8

Annual Funding - FET 3021 | Procurement | Space Procurement, Air Force							
Fiscal Year	Quantity	BY 2015 $M					
		End Item Recurring Flyaway	Non End Item Recurring Flyaway	Non Recurring Flyaway	Total Flyaway	Total Support	Total Program
2027	2	9.0	--	--	9.0	3.7	12.7
2028	4	14.9	--	--	14.9	7.1	22.0
2029	3	11.4	--	--	11.4	6.2	17.6
2030	--	2.7	--	--	2.7	0.9	3.6
2031	--	1.3	--	--	1.3	1.1	2.4
2032	--	1.3	--	--	1.3	1.1	2.4
2033	--	1.2	--	--	1.2	0.8	2.0
2034	--	0.4	--	--	0.4	0.1	0.5
Subtotal	9	42.2	--	--	42.2	21.0	63.2

Cost Quantity Information - FET 3021 | Procurement | Space Procurement, Air Force		
Fiscal Year	**Quantity**	**End Item Recurring Flyaway (Aligned With Quantity) BY 2015 $M**
2027	2	9.4
2028	4	18.7
2029	3	14.1
2030	--	--
2031	--	--
2032	--	--
2033	--	--
2034	--	--
Subtotal	9	42.2

Low Rate Initial Production

CPT

Item	Initial LRIP Decision	Current Total LRIP
Approval Date	7/5/2009	10/26/2015
Approved Quantity	101	53
Reference	Acquisition Strategy Production Phase Addendum	Milestone C ADM
Start Year	2010	2015
End Year	2012	2017

The Current Total LRIP Quantity is more than 10% of the total production quantity because an LRIP quantity of 53 terminals is required to satisfy IOC requirements and affords schedule flexibility to accommodate a shift of FRP to the right without impacting the IOC date.

The previous SAR reported the July 5, 2009 Acquisition Strategy Production Phase Addendum, which included FETs [formerly known as Advanced Wideband Terminals (AWTs)] to accomplish Initial Operational Test & Evaluation with LRIP assets. Due to programmatic and schedule changes no LRIP terminals were purchased using this approval.

The October 26, 2015 Milestone C ADM reflects an updated approved quantity removing the yet to be developed FET quantities and updating the CPT quantities to accommodated a shift of FRP to the right without impacting the CPT IOC date.

Foreign Military Sales

CPT

None

FET

None

Nuclear Costs

CPT

None

FET

None

Unit Cost

CPT

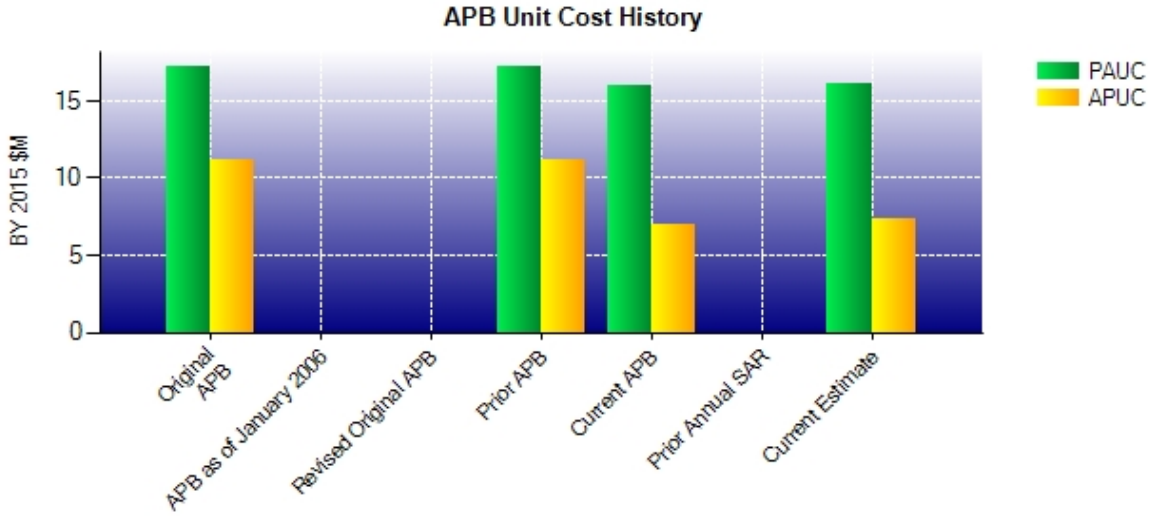
Unit Cost Report

Item	BY 2015 $M Current UCR Baseline (Mar 2016 APB)	BY 2015 $M Current Estimate (Dec 2015 SAR)	% Change
Program Acquisition Unit Cost			
Cost	1743.0	1759.8	
Quantity	109	109	
Unit Cost	15.991	16.145	+0.96
Average Procurement Unit Cost			
Cost	584.0	618.9	
Quantity	84	84	
Unit Cost	6.952	7.368	+5.98

Item	BY 2015 $M Original UCR Baseline (Dec 2007 APB)	BY 2015 $M Current Estimate (Dec 2015 SAR)	% Change
Program Acquisition Unit Cost			
Cost	1639.1	1759.8	
Quantity	95	109	
Unit Cost	17.254	16.145	-6.43
Average Procurement Unit Cost			
Cost	939.8	618.9	
Quantity	84	84	
Unit Cost	11.188	7.368	-34.14

CPT

Unit Cost History



Item	Date	BY 2015 $M		TY $M	
		PAUC	APUC	PAUC	APUC
Original APB	Dec 2007	17.254	11.188	16.589	11.370
APB as of January 2006	N/A	N/A	N/A	N/A	N/A
Revised Original APB	N/A	N/A	N/A	N/A	N/A
Prior APB	Dec 2007	17.254	11.188	16.589	11.370
Current APB	Mar 2016	15.991	6.952	15.579	7.410
Prior Annual SAR	Dec 2014	N/A	N/A	N/A	N/A
Current Estimate	Dec 2015	16.145	7.368	15.751	7.820

SAR Unit Cost History

Current SAR Baseline to Current Estimate (TY $M)									
Initial PAUC Development Estimate	Changes								PAUC Current Estimate
	Econ	Qty	Sch	Eng	Est	Oth	Spt	Total	
14.226	0.026	-2.760	0.947	0.623	3.025	0.000	-0.336	1.525	15.751

Current SAR Baseline to Current Estimate (TY $M)									
Initial APUC Development Estimate	Changes								APUC Current Estimate
	Econ	Qty	Sch	Eng	Est	Oth	Spt	Total	
8.775	-0.076	-0.770	1.064	0.000	-0.737	0.000	-0.436	-0.955	7.820

SAR Baseline History				
Item	SAR Planning Estimate	SAR Development Estimate	SAR Production Estimate	Current Estimate
Milestone A	N/A	N/A	N/A	N/A
Milestone B	N/A	N/A	N/A	N/A
Milestone C	N/A	N/A	N/A	N/A
IOC	N/A	Jun 2013	N/A	Dec 2019
Total Cost (TY $M)	N/A	1260.2	N/A	1716.9
Total Quantity	N/A	86	N/A	109
PAUC	N/A	14.653	N/A	15.751

FET

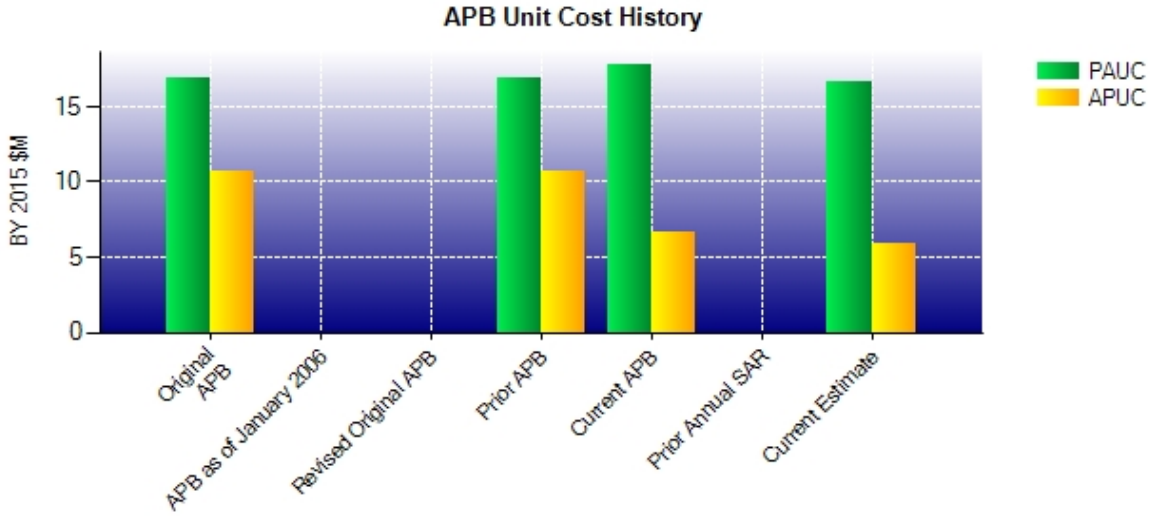
Unit Cost Report

Item	BY 2015 $M Current UCR Baseline (Mar 2016 APB)	BY 2015 $M Current Estimate (Dec 2015 SAR)	% Change
Program Acquisition Unit Cost			
Cost	2799.1	2627.1	
Quantity	158	158	
Unit Cost	17.716	16.627	-6.15
Average Procurement Unit Cost			
Cost	875.0	780.8	
Quantity	132	132	
Unit Cost	6.629	5.915	-10.77

Item	BY 2015 $M Original UCR Baseline (Dec 2007 APB)	BY 2015 $M Current Estimate (Dec 2015 SAR)	% Change
Program Acquisition Unit Cost			
Cost	2144.8	2627.1	
Quantity	127	158	
Unit Cost	16.888	16.627	-1.55
Average Procurement Unit Cost			
Cost	1204.0	780.8	
Quantity	113	132	
Unit Cost	10.655	5.915	-44.49

FET

Unit Cost History



Item	Date	BY 2015 $M		TY $M	
		PAUC	APUC	PAUC	APUC
Original APB	Dec 2007	16.888	10.655	16.112	10.717
APB as of January 2006	N/A	N/A	N/A	N/A	N/A
Revised Original APB	N/A	N/A	N/A	N/A	N/A
Prior APB	Dec 2007	16.888	10.655	16.112	10.717
Current APB	Mar 2016	17.716	6.629	18.453	8.080
Prior Annual SAR	Dec 2014	N/A	N/A	N/A	N/A
Current Estimate	Dec 2015	16.627	5.915	18.454	8.080

SAR Unit Cost History

Current SAR Baseline to Current Estimate (TY $M)									
Initial PAUC Development Estimate	Changes								PAUC Current Estimate
	Econ	Qty	Sch	Eng	Est	Oth	Spt	Total	
14.954	0.011	-1.378	1.242	0.676	1.197	0.000	1.752	3.500	18.454

Current SAR Baseline to Current Estimate (TY $M)									
Initial APUC Development Estimate	Changes								APUC Current Estimate
	Econ	Qty	Sch	Eng	Est	Oth	Spt	Total	
9.299	-0.082	0.206	1.487	0.000	-4.927	0.000	2.097	-1.219	8.080

SAR Baseline History				
Item	SAR Planning Estimate	SAR Development Estimate	SAR Production Estimate	Current Estimate
Milestone A	N/A	N/A	N/A	N/A
Milestone B	N/A	N/A	N/A	N/A
Milestone C	N/A	N/A	N/A	N/A
IOC	N/A	N/A	N/A	N/A
Total Cost (TY $M)	N/A	1907.2	N/A	2915.7
Total Quantity	N/A	130	N/A	158
PAUC	N/A	14.671	N/A	18.454

Cost Variance

CPT

Summary TY $M				
Item	**RDT&E**	**Procurement**	**MILCON**	**Total**
SAR Baseline (Development Estimate)	556.5	666.9	--	1223.4
Previous Changes				
Economic	+3.6	-6.0	--	-2.4
Quantity	+21.0	--	--	+21.0
Schedule	--	+86.6	--	+86.6
Engineering	+67.9	--	--	+67.9
Estimating	+397.2	+43.6	--	+440.8
Other	--	--	--	--
Support	--	+76.8	--	+76.8
Subtotal	+489.7	+201.0	--	+690.7
Current Changes				
Economic	+5.6	-0.4	--	+5.2
Quantity	--	+5.5	--	+5.5
Schedule	+13.8	+2.8	--	+16.6
Engineering	--	--	--	--
Estimating	-5.6	-105.5	--	-111.1
Other	--	--	--	--
Support	--	-113.4	--	-113.4
Subtotal	+13.8	-211.0	--	-197.2
Adjustments	--	--	--	--
Total Changes	+503.5	-10.0	--	+493.5
CE - Cost Variance	1060.0	656.9	--	1716.9
CE - Cost & Funding	1060.0	656.9	--	1716.9

Summary BY 2015 $M				
Item	**RDT&E**	**Procurement**	**MILCON**	**Total**
SAR Baseline (Development Estimate)	633.2	667.1	--	1300.3
Previous Changes				
Economic	--	--	--	--
Quantity	+22.4	--	--	+22.4
Schedule	--	+0.1	--	+0.1
Engineering	+72.5	--	--	+72.5
Estimating	+405.8	+105.5	--	+511.3
Other	--	--	--	--
Support	--	+53.5	--	+53.5
Subtotal	+500.7	+159.1	--	+659.8
Current Changes				
Economic	--	--	--	--
Quantity	--	-3.3	--	-3.3
Schedule	+13.1	+1.5	--	+14.6
Engineering	--	--	--	--
Estimating	-6.1	-99.5	--	-105.6
Other	--	--	--	--
Support	--	-106.0	--	-106.0
Subtotal	+7.0	-207.3	--	-200.3
Adjustments	--	--	--	--
Total Changes	+507.7	-48.2	--	+459.5
CE - Cost Variance	1140.9	618.9	--	1759.8
CE - Cost & Funding	1140.9	618.9	--	1759.8

Previous Estimate: June 2015

RDT&E	$M	
Current Change Explanations	Base Year	Then Year
Revised escalation indices. (Economic)	N/A	+5.6
Adjustment for current and prior escalation. (Estimating)	-6.1	-5.6
Stretch-out of required testing into FY 2017. (Schedule)	+13.1	+13.8
RDT&E Subtotal	+7.0	+13.8

Procurement	$M	
Current Change Explanations	Base Year	Then Year
Revised escalation indices. (Economic)	N/A	-0.4
Adjustment for current and prior escalation. (Estimating)	-0.3	-0.4
Adjustment for current and prior escalation. (Support)	+0.1	+0.2
Quantity variance resulting from an increase of 52 ground terminals from 0 to 52 based on current fielding priorities and the realignment from Other Procurement, Air Force (OPAF) for all ground terminals after FY 2015 to Space Procurement, Air Force (SPAF). (Subtotal)	+256.3	+274.3
Quantity variance resulting from an increase of 52 ground terminals from 0 to 52 (SPAF). (Quantity)	(+195.3)	(+209.0)
Allocation to Schedule resulting from Quantity change. (Schedule) (QR)	(+40.6)	(+43.5)
Allocation to Estimating resulting from Quantity change. (Estimating) (QR)	(+20.4)	(+21.8)
Acceleration of procurement buy profile from FY 2017 to FY 2015 and 2016 based on current fielding priorities (Aircraft Procurement, Air Force (APAF)). (Schedule)	0.0	-1.0
Stretch-out of procurement buy profile based on current fielding priorities (OPAF). (Schedule)	0.0	+0.5
Quantity variance resulting from a decrease of 54 ground terminals from 63 to 9 based on current fielding priorities and the realignment to SPAF for all ground terminals after FY 2015 (OPAF). (Subtotal)	-267.1	-274.8
Quantity variance resulting from a decrease of 54 ground terminals from 63 to 9 (OPAF). (Quantity)	(-205.9)	(-211.7)
Allocation to Schedule resulting from Quantity change. (Schedule) (QR)	(-40.8)	(-42.1)
Allocation to Estimating resulting from Quantity change. (Estimating) (QR)	(-20.4)	(-21.0)
Quantity variance resulting from an increase of 2 Airborne CPTs from 21 to 23 based on current fielding priorities (APAF). (Subtotal)	+9.8	+10.9
Quantity variance resulting from an increase of 2 Airborne CPTs from 21 to 23 based on current fielding priorities (APAF). (Quantity)	(+7.3)	(+8.2)
Allocation to Schedule resulting from Quantity change. (Schedule) (QR)	(+1.7)	(+1.9)
Allocation to Estimating resulting from Quantity change. (Estimating) (QR)	(+0.8)	(+0.8)
Revised estimate based on current fielding plan (APAF). (Estimating)	+4.2	+4.6
Revised estimate based on savings from competitive down select, including realignment from OPAF to appropriation SPAF (OPAF). (Estimating)	-95.1	-104.9
Revised estimate based on savings from competitive down select, including realignment from OPAF to appropriation SPAF (SPAF). (Estimating)	-9.1	-6.4
Decrease in Other Support as a result of reallocated logistics support between appropriations to better align with current fielding plan (APAF). (Support)	-23.5	-25.3
Increase in Initial Spares due to updated assumptions regarding number of terminals requiring sparing (APAF). (Support) (QR)	+11.9	+12.6

Decrease in Other as a result of reallocated logistics support between appropriations to better align with current fielding plan and realignment between Procurement appropriations (OPAF). (Support)	-33.9	-35.6
Decrease in Initial Spares due to realized savings impact as a result of competitive down select, updated assumptions regarding number of terminals requiring sparing, and realignment between Procurement appropriations (OPAF). (Support) (QR)	-152.5	-164.3
Increase in Other Support as a result of reallocated logistics support between appropriations to better align with current fielding plan and realignment between Procurement appropriations (SPAF). (Support)	+56.6	+60.5
Increase in Initial Spares due to a realignment between Procurement appropriations (SPAF). (Support)	+35.3	+38.5
Procurement Subtotal	-207.3	-211.0

(QR) Quantity Related

Cost Variance

FET

Summary TY $M				
Item	**RDT&E**	**Procurement**	**MILCON**	**Total**
SAR Baseline (Development Estimate)	874.6	1069.4	--	1944.0
Previous Changes				
Economic	+5.7	-9.4	--	-3.7
Quantity	--	+177.3	--	+177.3
Schedule	--	+136.0	--	+136.0
Engineering	+106.8	--	--	+106.8
Estimating	+461.3	-591.9	--	-130.6
Other	--	--	--	--
Support	--	+120.8	--	+120.8
Subtotal	+573.8	-167.2	--	+406.6
Current Changes				
Economic	+6.9	-1.4	--	+5.5
Quantity	+15.6	+8.0	--	+23.6
Schedule	--	+60.3	--	+60.3
Engineering	--	--	--	--
Estimating	+378.2	-58.5	--	+319.7
Other	--	--	--	--
Support	--	+156.0	--	+156.0
Subtotal	+400.7	+164.4	--	+565.1
Adjustments	--	--	--	--
Total Changes	+974.5	-2.8	--	+971.7
CE - Cost Variance	1849.1	1066.6	--	2915.7
CE - Cost & Funding	1849.1	1066.6	--	2915.7

Summary BY 2015 $M				
Item	**RDT&E**	**Procurement**	**MILCON**	**Total**
SAR Baseline (Development Estimate)	994.9	1082.2	--	2077.1
Previous Changes				
Economic	--	--	--	--
Quantity	--	+170.6	--	+170.6
Schedule	--	+0.3	--	+0.3
Engineering	+113.9	--	--	+113.9
Estimating	+441.4	-594.0	--	-152.6
Other	--	--	--	--
Support	--	+83.7	--	+83.7
Subtotal	+555.3	-339.4	--	+215.9
Current Changes				
Economic	--	--	--	--
Quantity	+9.9	-0.2	--	+9.7
Schedule	--	--	--	--
Engineering	--	--	--	--
Estimating	+286.2	-53.7	--	+232.5
Other	--	--	--	--
Support	--	+91.9	--	+91.9
Subtotal	+296.1	+38.0	--	+334.1
Adjustments	--	--	--	--
Total Changes	+851.4	-301.4	--	+550.0
CE - Cost Variance	1846.3	780.8	--	2627.1
CE - Cost & Funding	1846.3	780.8	--	2627.1

Previous Estimate: June 2015

RDT&E	$M	
Current Change Explanations	Base Year	Then Year
Revised escalation indices. (Economic)	N/A	+6.9
Adjustment for current and prior escalation. (Estimating)	-8.0	-7.3
8 additional Engineering Development Models added to support FET follow on development. (Quantity)	+9.9	+15.6
Revised estimate for separate FET acquisition beyond the FYDP incorporating updated baseline per the Milestone C approved SCP. (Estimating)	+294.2	+385.5
RDT&E Subtotal	+296.1	+400.7

Procurement	$M	
Current Change Explanations	Base Year	Then Year
Revised escalation indices. (Economic)	N/A	-1.4
Quantity variance resulting from a decrease of 9 ground terminals from 9 to 0 due to a realignment from SPAF to OPAF based on the current Air Force funding position (OPAF). (Subtotal)	-29.5	-34.9
Quantity variance resulting from a decrease of 9 ground terminals from 9 to 0 due to a realignment from SPAF to OPAF based on the current Air Force funding position (OPAF). (Quantity)	(-58.0)	(-68.7)
Allocation to Schedule resulting from Quantity change. (Schedule) (QR)	(-8.5)	(-10.0)
Allocation to Estimating resulting from Quantity change. (Estimating) (QR)	(+37.0)	(+43.8)
Quantity variance resulting from an increase of 9 ground terminals from 0 to 9 due to a realignment from SPAF to OPAF based on the current Air Force funding position (SPAF). (Subtotal)	+29.4	+38.9
Quantity variance resulting from an increase of 9 ground terminals from 0 to 9 due to a realignment from SPAF to OPAF based on the current Air Force funding position (SPAF). (Quantity)	(+57.8)	(+76.7)
Allocation to Schedule resulting from Quantity change. (Schedule) (QR)	(+8.5)	(+11.3)
Allocation to Estimating resulting from Quantity change. (Estimating) (QR)	(-36.9)	(-49.1)
Stretch-out of procurement buy profile from FY 2022-2025 to FY 2027-2030 to separate FET acquisition beyond the FYDP (APAF). (Schedule)	0.0	+59.0
Revised estimate for separate FET acquisition beyond the FYDP incorporating updated baseline per the milestone C approved SCP (APAF). (Estimating)	-56.8	-59.1
Revised estimate for separate FET acquisition beyond the FYDP incorporating updated baseline per the milestone C approved SCP including realignment between OPAF and procurement appropriation SPAF. (SPAF) (Estimating)	+12.8	+17.5
Revised estimate for separate FET acquisition beyond the FYDP incorporating updated baseline per the milestone C approved SCP including realignment between OPAF and procurement appropriation SPAF (OPAF). (Estimating)	-9.8	-11.6
Increase in Other Support for separate FET acquisition beyond the FYDP incorporating updated baseline per the milestone C approved SCP (APAF). (Support)	+33.1	+52.6
Increase in Initial Spares for separate FET acquisition beyond the FYDP incorporating updated baseline per the milestone C approved SCP (APAF). (Support)	+47.1	+86.0
Increase in Other Support for separate FET acquisition beyond the FYDP incorporating updated baseline per the milestone C approved SCP including realignment between	+6.0	+8.4

OPAF and procurement appropriation SPAF (SPAF). (Support)		
Increase in Initial Spares for separate FET acquisition beyond the FYDP incorporating updated baseline per the milestone C approved SCP including realignment between OPAF and procurement appropriation SPAF (SPAF). (Support)	+15.0	+20.0
Decrease in Other Support due to realignment between OPAF and procurement appropriation SPAF (OPAF). (Support)	-1.7	-2.0
Decrease in Initial Spares due to realignment between OPAF and procurement appropriation SPAF (OPAF). (Support)	-7.6	-9.0
Procurement Subtotal	+38.0	+164.4

(QR) Quantity Related

Contracts

Contract Identification

Appropriation: RDT&E
Contract Name: FAB-T CPT Development
Contractor: Raytheon
Contractor Location: 1001 Boston Post Road E
Marlborough, MA 01752-2377
Contract Number: FA8307-12-C-0013
Contract Type: Firm Fixed Price (FFP), Fixed Price Incentive(Firm Target) (FPIF)
Award Date: September 07, 2012
Definitization Date: April 10, 2013

Contract Price							
Initial Contract Price ($M)			Current Contract Price ($M)			Estimated Price At Completion ($M)	
Target	Ceiling	Qty	Target	Ceiling	Qty	Contractor	Program Manager
215.3	215.3	N/A	215.3	215.3	13	215.3	215.3

Contract Variance		
Item	Cost Variance	Schedule Variance
Cumulative Variances To Date	0.0	0.0
Previous Cumulative Variances	0.0	0.0
Net Change	+0.0	+0.0

Cost and Schedule Variance Explanations

None

General Contract Variance Explanation

Cost and schedule variances are not reported for this contract, because the cost or incentive portion does not meet the threshold requirements for earned value management reporting.

Notes

Thirteen EDMs will be produced under the contract; six will be delivered to the Government and seven will be retained by the contractor for testing purposes.

"Initial Contract Price" changed from $70.0M to $215.3M due to a correction of previously reported values

Contract Identification

Appropriation: Procurement

Contract Name: FAB-T CPT Production

Contractor: Raytheon

Contractor Location: 1001 Boston Post Road East
Marlborough, MA 01752-2377

Contract Number: FA8705-13-C-0005

Contract Type: Firm Fixed Price (FFP)

Award Date: September 27, 2013

Definitization Date: June 02, 2014

Contract Price							
Initial Contract Price ($M)			Current Contract Price ($M)			Estimated Price At Completion ($M)	
Target	Ceiling	Qty	Target	Ceiling	Qty	Contractor	Program Manager
298.5	N/A	84	298.5	N/A	84	298.5	298.5

Cost and Schedule Variance Explanations

Cost and Schedule Variance reporting is not required on this (FFP) contract.

Deliveries and Expenditures

CPT

Deliveries				
Delivered to Date	Planned to Date	Actual to Date	Total Quantity	Percent Delivered
Development	15	15	25	60.00%
Production	0	0	84	0.00%
Total Program Quantity Delivered	15	15	109	13.76%

Expended and Appropriated (TY $M)			
Total Acquisition Cost	1716.9	Years Appropriated	16
Expended to Date	950.8	Percent Years Appropriated	76.19%
Percent Expended	55.38%	Appropriated to Date	1331.7
Total Funding Years	21	Percent Appropriated	77.56%

The above data is current as of February 10, 2016.

Total CPT Quantity for Development includes 13 Raytheon EDMs. Planned/Actual reflect 12 deliveries under the Boeing contract and 3 to date under the Raytheon contract.

FET

Deliveries				
Delivered to Date	Planned to Date	Actual to Date	Total Quantity	Percent Delivered
Development	18	18	26	69.23%
Production	0	0	132	0.00%
Total Program Quantity Delivered	18	18	158	11.39%

Expended and Appropriated (TY $M)			
Total Acquisition Cost	2915.7	Years Appropriated	16
Expended to Date	1206.2	Percent Years Appropriated	47.06%
Percent Expended	41.37%	Appropriated to Date	1206.2
Total Funding Years	34	Percent Appropriated	41.37%

The above data is current as of February 10, 2016.

Quantity reflects 26 total FET EDM systems, 18 Boeing FET systems delivered to date and 8 additional FET EDM required to complete the EDM development effort per the Service Cost Position approved July 7, 2015.

Operating and Support Cost

CPT

Cost Estimate Details

Date of Estimate:	July 07, 2015
Source of Estimate:	SCP
Quantity to Sustain:	84
Unit of Measure:	Terminals
Service Life per Unit:	33.00 Years
Fiscal Years in Service:	FY 2017 - FY 2049

Costs based on the SCP approved July 7, 2015 in support of Milestone C. FAB-T CPT O&S consists of 84 Production Systems; there are 25 Engineering Development Models (EDMs) that will not be sustained after the program transitions to O&S. Interim Contractor Support (ICS) costs are included in the Production contract and are not included in the O&S Cost.

Sustainment Strategy

The product support strategy is structured to optimize customer support and system availability, minimize ownership costs and logistics footprint, and make the best use of public and private sector capabilities. The FAB-T maintenance concept employs two levels of support: Organizational Level Maintenance (O-Level) and Depot Level (D-Level). O-Level support will be provided by organic O&M personnel upon successful installation and government acceptance of the first LRIP terminal. They will be supported with initial spares, support equipment, and training. Since the Ground Fixed CPTs will replace existing Milstar terminals in existing fixed facilities, no new facilities are required. Additionally, FAB-T does not require the creation of a new Air Force Specialty Code (AFSC) for O&M. The production contract includes four consecutive twelve-month options for D-Level ICS and continues until the transition to organic depot level support or a combination of public and private support. The FAB-T technical data rights strategy is structured to support full organic and/or competitive contractor logistics support in the future with specifications, software documents, system drawings, and other engineering data to facilitate future competition for sustainment.

Antecedent Information

For CPTs, FAB-T is a replacement terminal for the existing Milstar CPTs at ground (fixed and mobile) sites and E-4 and E-6 airborne platforms. There are 82 Milstar terminals, each with an expected service life of 18 years. Antecedent Costs were not normalized to reflect operational/capability differences between the FAB-T and Milstar terminals.

The antecedent Milstar CPT POE is from April 2003 finalized in Air Force Space Command's budget request to Headquarters Air Force.

Annual O&S Costs BY2015 $K		
Cost Element	**CPT Average Annual Cost Per Terminals**	**MILSTAR CPT (Antecedent) Average Annual Cost Per Terminal**
Unit-Level Manpower	29.208	0.000
Unit Operations	68.163	234.000
Maintenance	115.363	0.000
Sustaining Support	86.128	180.000
Continuing System Improvements	105.229	0.000
Indirect Support	25.657	0.000
Other	0.000	0.000
Total	429.748	414.000

Item	Total O&S Cost $M			
	CPT			MILSTAR CPT (Antecedent)
	Current Production APB Objective/Threshold		Current Estimate	
Base Year	1191.3	1310.4	1191.3	0.0
Then Year	1788.3	N/A	1788.3	N/A

Equation to Translate Annual Cost to Total Cost

Total O&S Cost = service life per system * number of systems * unitized cost

Total O&S Cost = 33 years per terminal * 84 terminals * $429.748K

O&S Cost Variance		
Category	**BY 2015 $M**	**Change Explanations**
Prior SAR Total O&S Estimates - Jun 2015 SAR	2168.0	
Programmatic/Planning Factors	0.0	
Cost Estimating Methodology	0.0	
Cost Data Update	0.0	
Labor Rate	0.0	
Energy Rate	0.0	
Technical Input	-976.7	Previous O&S estimate, CAPE ICE from 2009, was based on the program before the down select. As a result of the competitive process a different technical solution was selected with lower upfront as well as lower estimated maintenance costs.
Other	0.0	
Total Changes	-976.7	
Current Estimate	1191.3	

Disposal Estimate Details

Date of Estimate:	July 07, 2015
Source of Estimate:	SCP
Disposal/Demilitarization Total Cost (BY 2015 $M):	Total costs for disposal of all Terminals are 8.5

Updated from 2009 CAPE ICE to 2015 SCP used in support of Milestone C. 2009 estimate did not include disposal costs.

FET

Cost Estimate Details

Date of Estimate: July 07, 2015
Source of Estimate: SCP
Quantity to Sustain: 132
Unit of Measure: Terminals
Service Life per Unit: 26.00 Years
Fiscal Years in Service: FY 2024 - FY 2049

Costs based on the SCP approved July 7, 2015 in support of Milestone C. FAB-T FET O&S consists of 132 Production terminals; there are 26 EDM terminals that will not be sustained after the program transitions to O&S. ICS costs are included in the Production contract and are not included in the O&S Cost.

The Air Force is currently working to determine the FET strategy; therefore, specific fiscal year placed in service and fiscal year retired are notional pending an approved strategy.

Sustainment Strategy

The FET sustainment strategy cannot be determined until the overall strategy is defined. While the FET remains a valid requirement for the FAB-T program, it is currently unfunded and the Air Force has not yet finalized its strategy for FET development.

Antecedent Information

No Antecedent

Annual O&S Costs BY2015 $K		
Cost Element	**FET Average Annual Cost Per Terminals**	**No Antecedent (Antecedent)**
Unit-Level Manpower	16.893	--
Unit Operations	0.000	--
Maintenance	205.923	--
Sustaining Support	0.000	--
Continuing System Improvements	30.137	--
Indirect Support	8.355	--
Other	--	--
Total	261.308	--

Item	Total O&S Cost $M			
	FET			No Antecedent (Antecedent)
	Current Development APB Objective/Threshold		Current Estimate	
Base Year	896.8	986.5	896.8	N/A
Then Year	1438.4	N/A	1438.4	N/A

Equation to Translate Annual Cost to Total Cost

Total O&S Cost = service life per system * number of systems * unitized cost

Total O&S Cost = 26 years per terminal * 132 terminals * $261.308K

O&S Cost Variance		
Category	**BY 2015 $M**	**Change Explanations**
Prior SAR Total O&S Estimates - Jun 2015 SAR	3406.9	
Programmatic/Planning Factors	0.0	
Cost Estimating Methodology	0.0	
Cost Data Update	0.0	
Labor Rate	0.0	
Energy Rate	0.0	
Technical Input	-2510.1	Previous O&S estimate, CAPE ICE from 2009, was based on the program before the down select. As a result of the competitive process a different technical solution was selected with lower upfront as well as lower estimated maintenance costs.
Other	0.0	
Total Changes	-2510.1	
Current Estimate	896.8	

Disposal Estimate Details

Date of Estimate: July 07, 2015

Source of Estimate: SCP

Disposal/Demilitarization Total Cost (BY 2015 $M): Total costs for disposal of all Terminals are 13.3

Updated from 2009 CAPE ICE to 2015 SCP used in support of Milestone C. 2009 estimate did not include disposal costs.